5G-GATE

5G SIMPLIFIED

5G WORKS USING MICRO-WAVES.

MICROWAVES ARE SHORT MILIMETER WAVES ON THE RADIO FREQUENCY SPECTRUM.

MICROWAVES GIVE OFF RADIATION WHICH IS NON-IONISING.

5G WORKS USING EXTREMELY HIGH FREQUENCIES (EHF) AND EXTREMELY LOW FREQUENCIES (ELF).

ALL FREQUENCIES PRODUCED BY 5G ARE HARMFUL TO ALL LIFE FORMS.

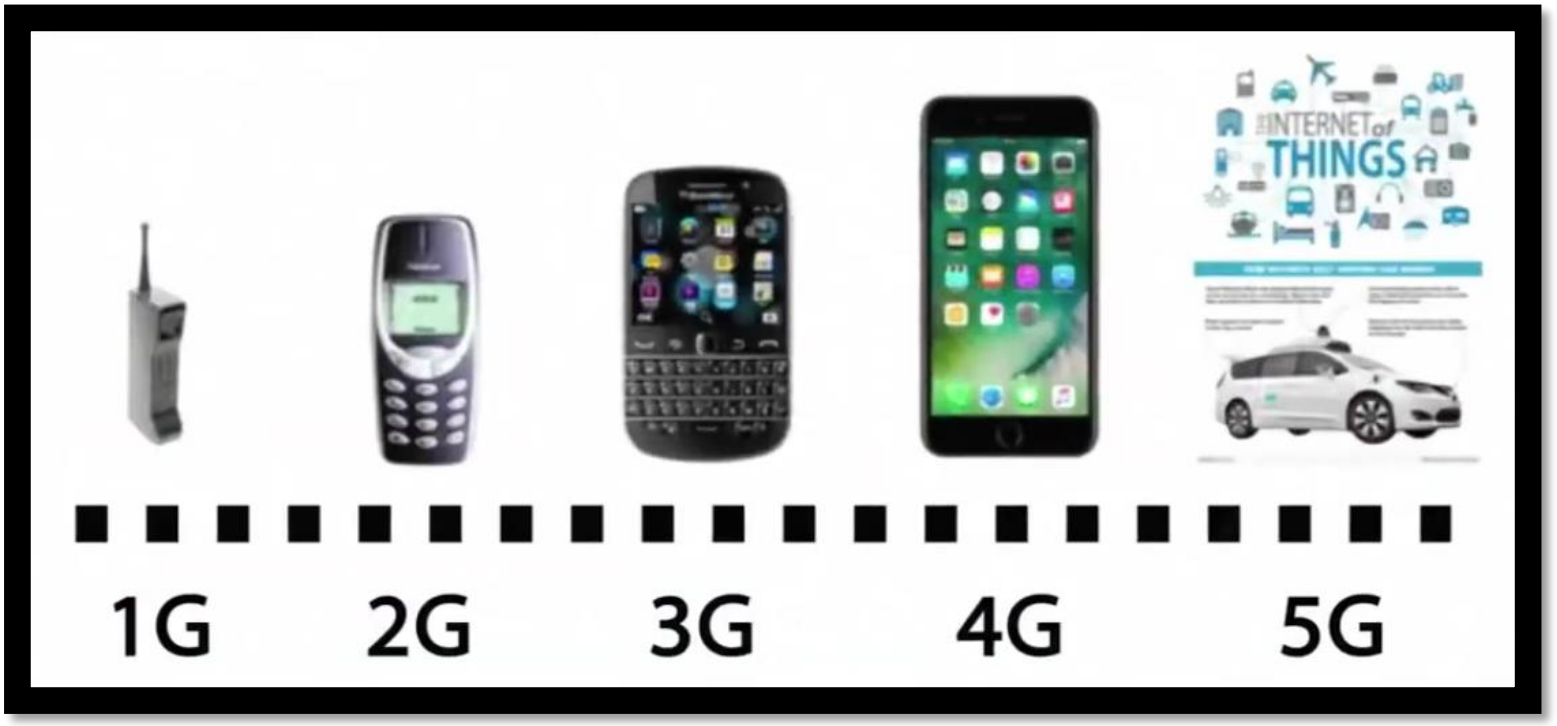
MICRO-WAVES ARE A TYPE OF ELECTRO MAGNETIC FIELD (EMF).

5G TECHNOLOGY IS MILITARISED MICRO-WAVE BATTLEFIELD INTERGIATION EQUIPMENT.

5G IS SLOWLY KILLING YOU, YOUR FAMILY, THE PLANET AND ALL BIOLOGICAL LIFE ON EARTH.

5G EXPLAINED

The 5 stands for “fifth” and the G stands for “generation”. As the years developed you started to see more complex signal systems in telecommunications industry.



5G is described as the next generation in wireless communications.

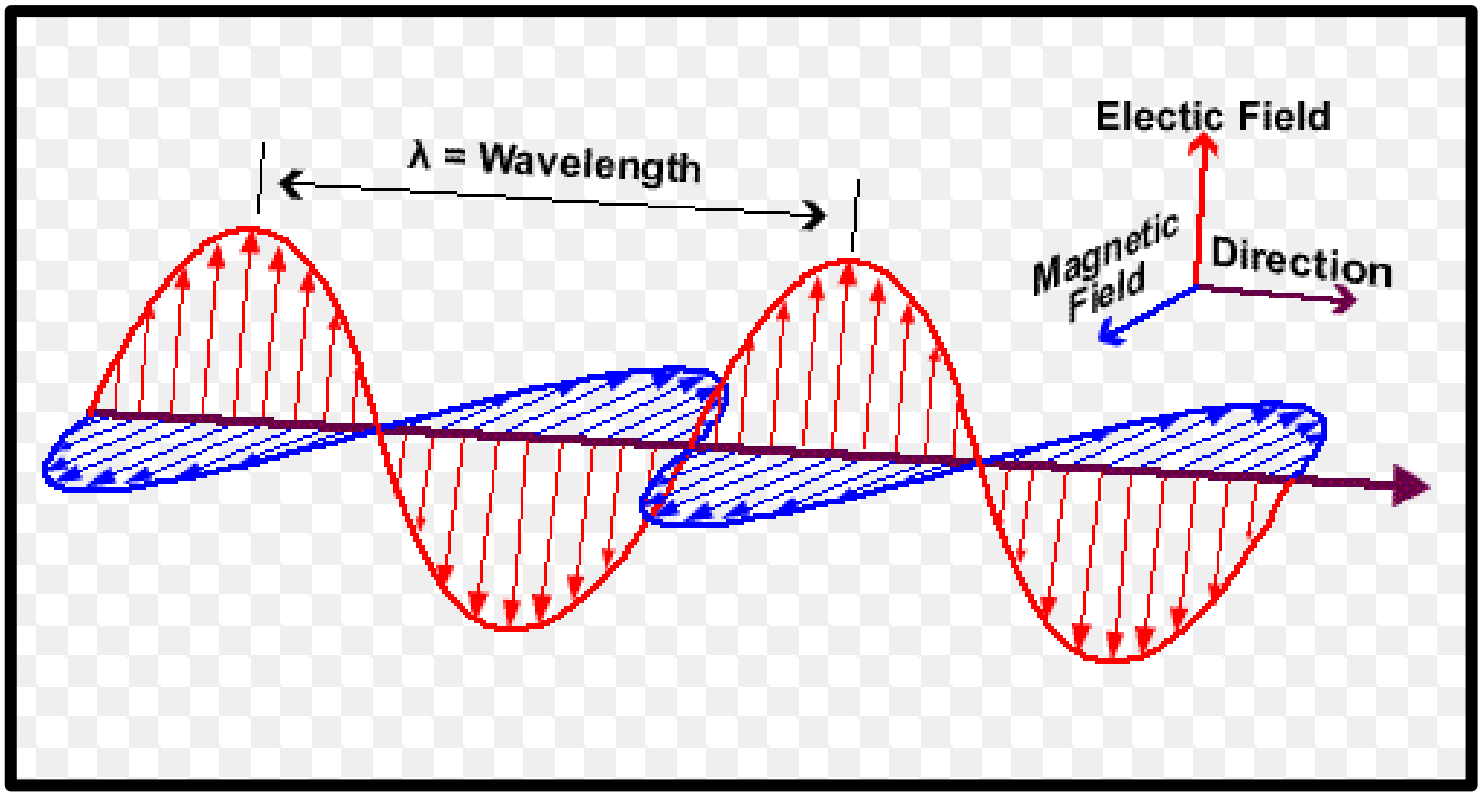
YOU MUST UNDERSTAND THAT ALL FORMS OF WIRELESS TECHNOLOGY, INCLUDING 5G, IS RADIATION AND IS EXTREMELY HARMFUL TO YOUR HEALTH.

5G is currently online in the UK and is expected to go fully autonomic by 2025. It works using untapped bandwidth of the millimetre wave (mmw) at frequencies between 3-300ghz+.

5G promises faster upload and download speeds, faster wireless connection and is the foundation for the internet of things (IOT), but at what cost?

HOW 5G WORKS

In order to understand 5G you need to understand electromagnetic fields or EMF'S. An EMF is a combination of an electrical field and a magnetic field that's radiated out from a source of electricity. They are photons traveling at the speed of light sometimes referred to as electro magnetic waves.

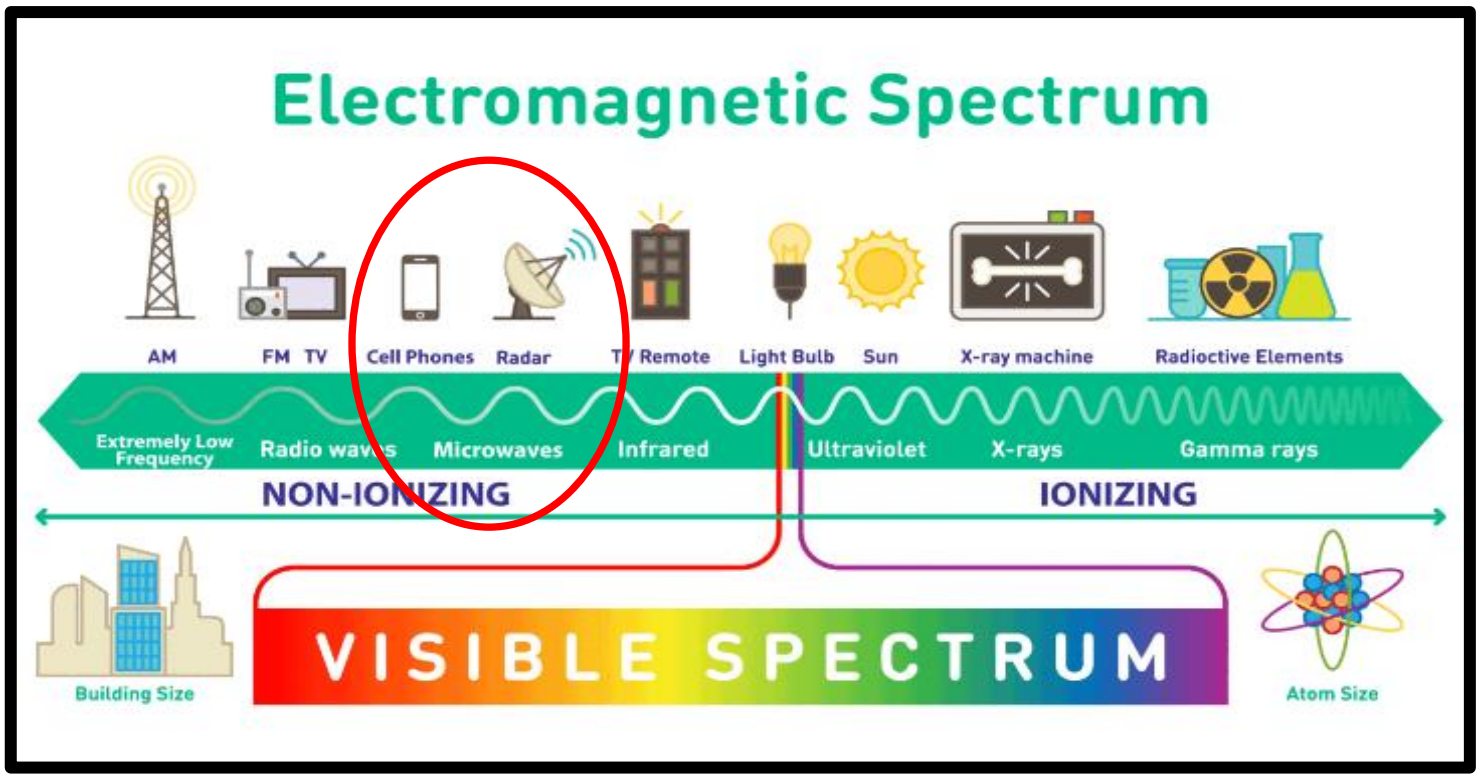


THE ELECTROMAGNETIC WAVE SPECTRUM

The electromagnetic spectrum (or radio frequency spectrum) is split into 7 different types of electromagnetic waves and encompasses all wave frequencies.

Although EM waves are divided into 7 basic types, all are manifestations of the same phenomenon.

- **RADIO WAVES – INSTANT COMMUNICATION**
- **MICROWAVES – DATA TRANSFER + HEAT (5G)**
- **INFRARED WAVES - INVISIBLE HEAT**
- **VISIBLE LIGHT RAYS**
- **ULTRAVIOLET WAVES – ENERGETIC LIGHT**
- **X RAYS – PENETRATING RADIATION**
- **GAMMA RAYS – NUCLEAR ENERGY**



MICRO-WAVES

Now you know about electromagnetic fields, let's take a closer look at Microwaves and how they work with 5G. Microwaves have a range of applications such as…

COMMUNICATIONS + DATA TRANSFER

HEAT/COOKING

RADAR

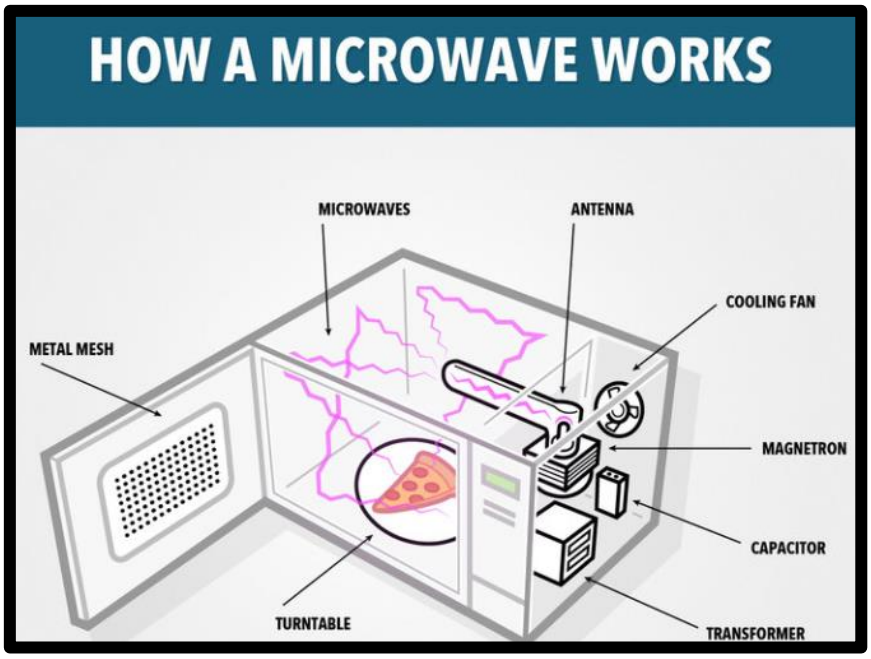
Let's look at these applications in greater detail.

COMMUNICATIONS AND DATA TRANSFER

Microwaves are very good at transmitting information at incredibly fast speeds by using untapped bandwidth of the millimetre wave.

HEAT/COOKING

Microwaves are most commonly known for cooking food. This is where the term "microwave oven" comes from. Microwaves are transmitted into the cooking chamber, bounce around and cook the food.



1. A **TRANSFORMER** converts the standard household electricity of 120 volts to around 4,000 volts or higher to power the magnetron, the component inside the microwave oven that generates microwaves from electricity.

2. The voltage heats a filament at the center of the **MAGNETRON** that boils off electrons. The electrons are whirled around by two ring magnets. This creates microwaves at a specific frequency, typically 2.45 gigahertz.

3. The microwaves are transmitted into the cooking chamber by an **ANTENNA**.

4. The **MICROWAVES** bounce around inside the cooking compartment eventually penetrating the food, in turn heating it up.

5. The microwave door contains a **METAL MESH** with holes that are small enough so that microwaves can't escape but visible light can, so we can see what's cooking inside.

6. Most microwaves have a revolving glass **TURNTABLE** that moves the food around like a carousel so it heats evenly.

BUSINESS INSIDER

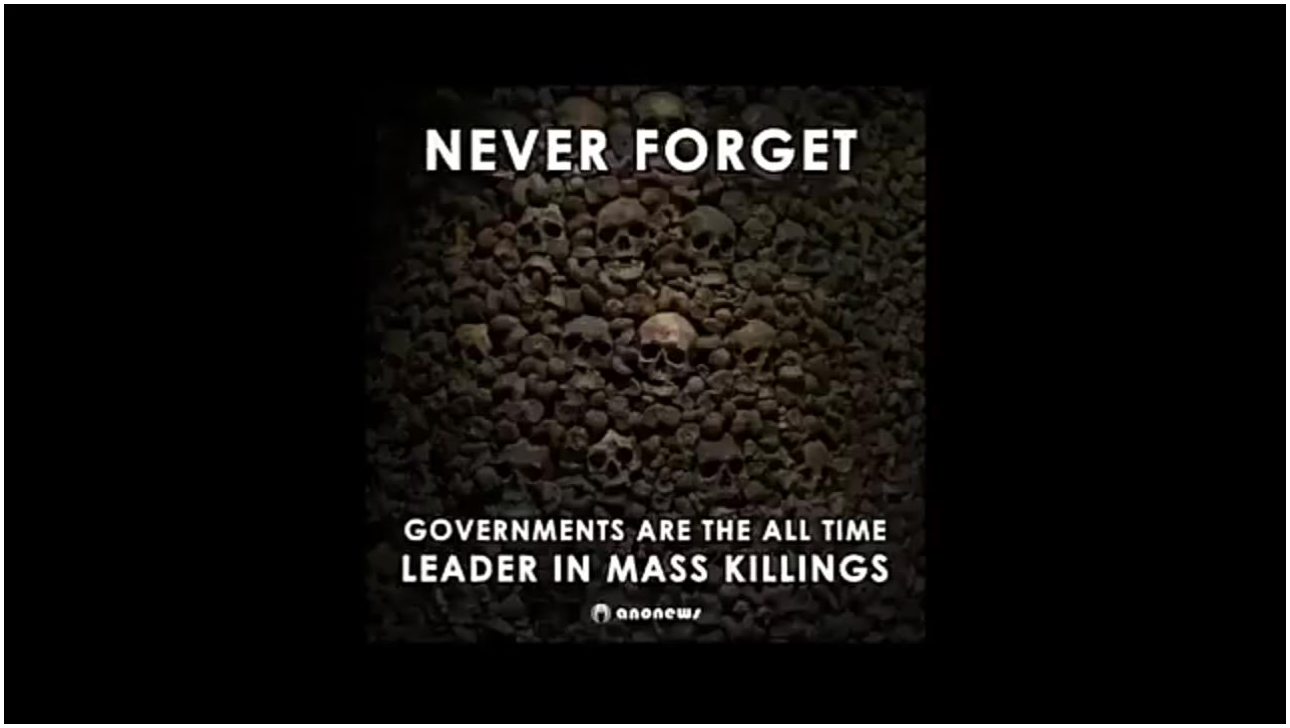
ITS VERY IMPORTANT YOU UNDERSTAND THAT…

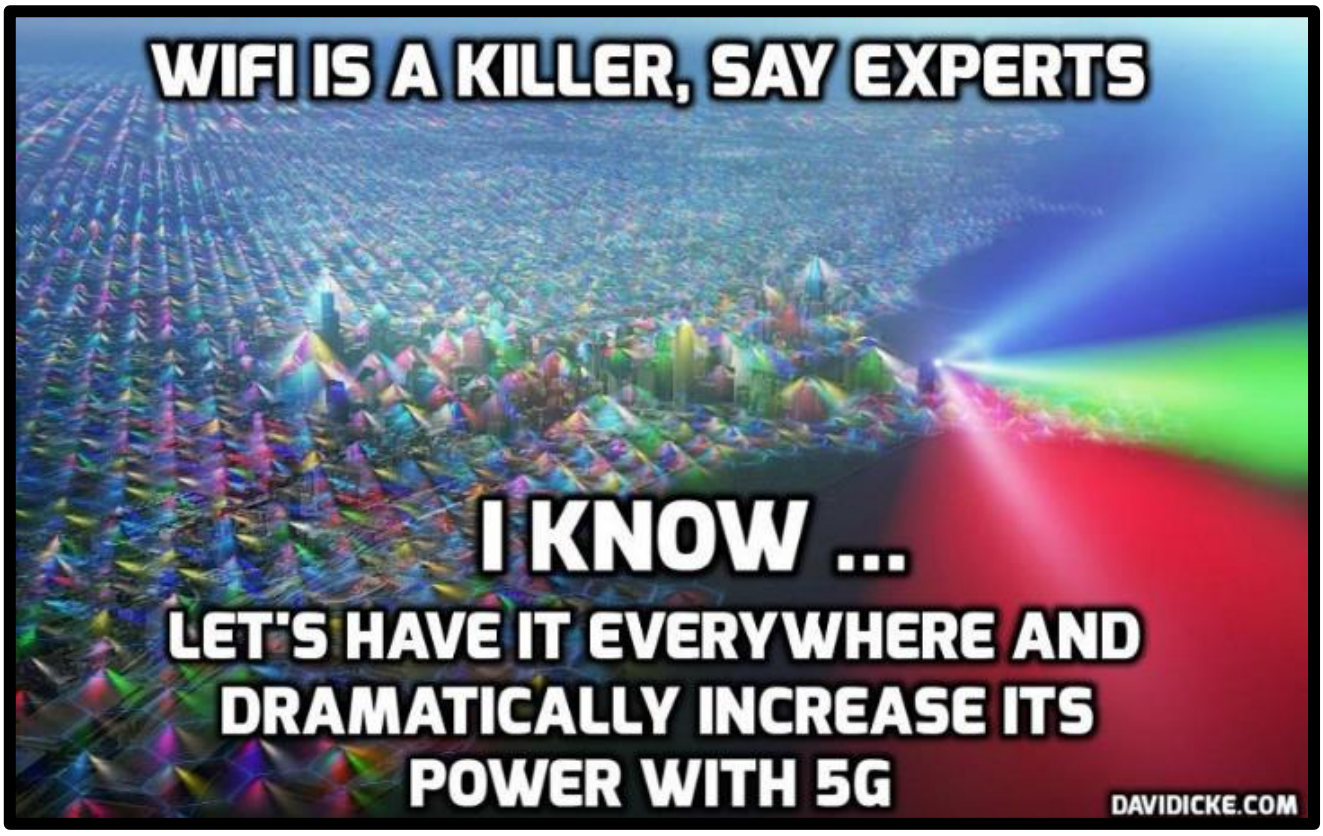
5G WORKS USING MICROWAVES

MICROWAVES FREQUENCIES CAN BE TURNED UP PRODUCING EXTREME HEAT

THIS MEANS 5G CAN BE UTLISED AS A WEAPON. THE FREQUENCY COULD BE TURNED UP IN ANY DEMOGRAPHIC AREA AND MICROWAVE THE PEOPLE

5G HAS THE CAPABILITY AND POTENTIAL TO BE USED AS A DIRECTED ENERGY WEAPON OF MASS DESTRUCTION ANYWHERE IN THE WORLD


NEVER FORGET
GOVERNMENTS ARE THE ALL TIME
LEADER IN MASS KILLINGS


WIFI IS A KILLER, SAY EXPERTS
I KNOW ...
LET'S HAVE IT EVERYWHERE AND
DRAMATICALLY INCREASE ITS
POWER WITH 5G
DAVIDICKE.COM

MICROWAVE WAREFARE

Its important to understand that microwave warfare is very real and is used by governments worldwide for many different purposes.

Direct energy weapons emit HIGH FREQUENCY WAVES known as extremely high frequencies (EHF) and LOW FREQUENCY WAVES known as extremely low frequencies (ELF).

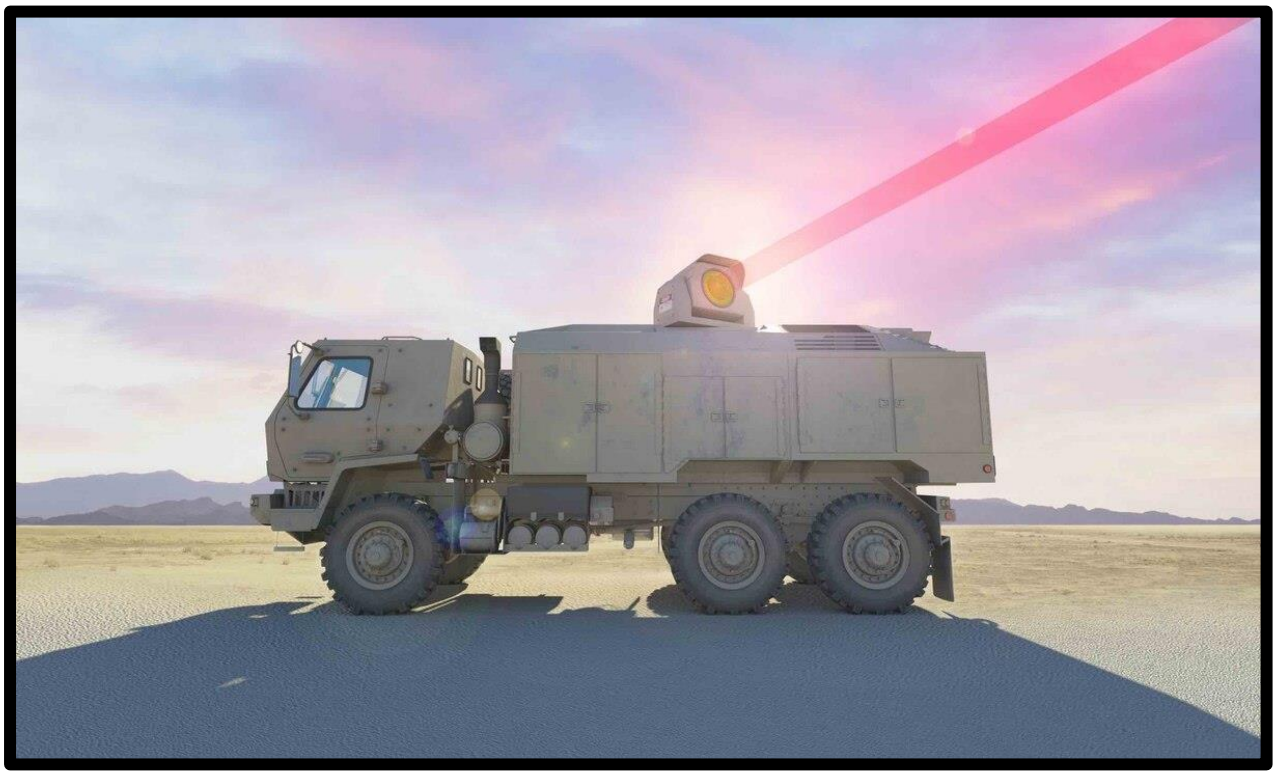
EHF burn your skin and are used in crowd dispersal. ELF are used to make you very sick from microwave radiation. All forms of microwave radiation are invisible but destroy our bodies and DNA on a cellular level.

“I joined the royal navy in 1960 and I specialised in microwave warfare. Radar, which obviously uses microwaves, but they don’t just teach you radar they teach you all about microwaves in other uses.”

“So, I understood about microwave warfare and how it can damage and harm people. Microwaves back then were used as weapons as they are today. It is a perfect stealth weapon that governments use on groups of people they don’t like.”

“For instance, the ladies who camped and protested at Greenham Common in England about the American missile base, they were microwaved.”

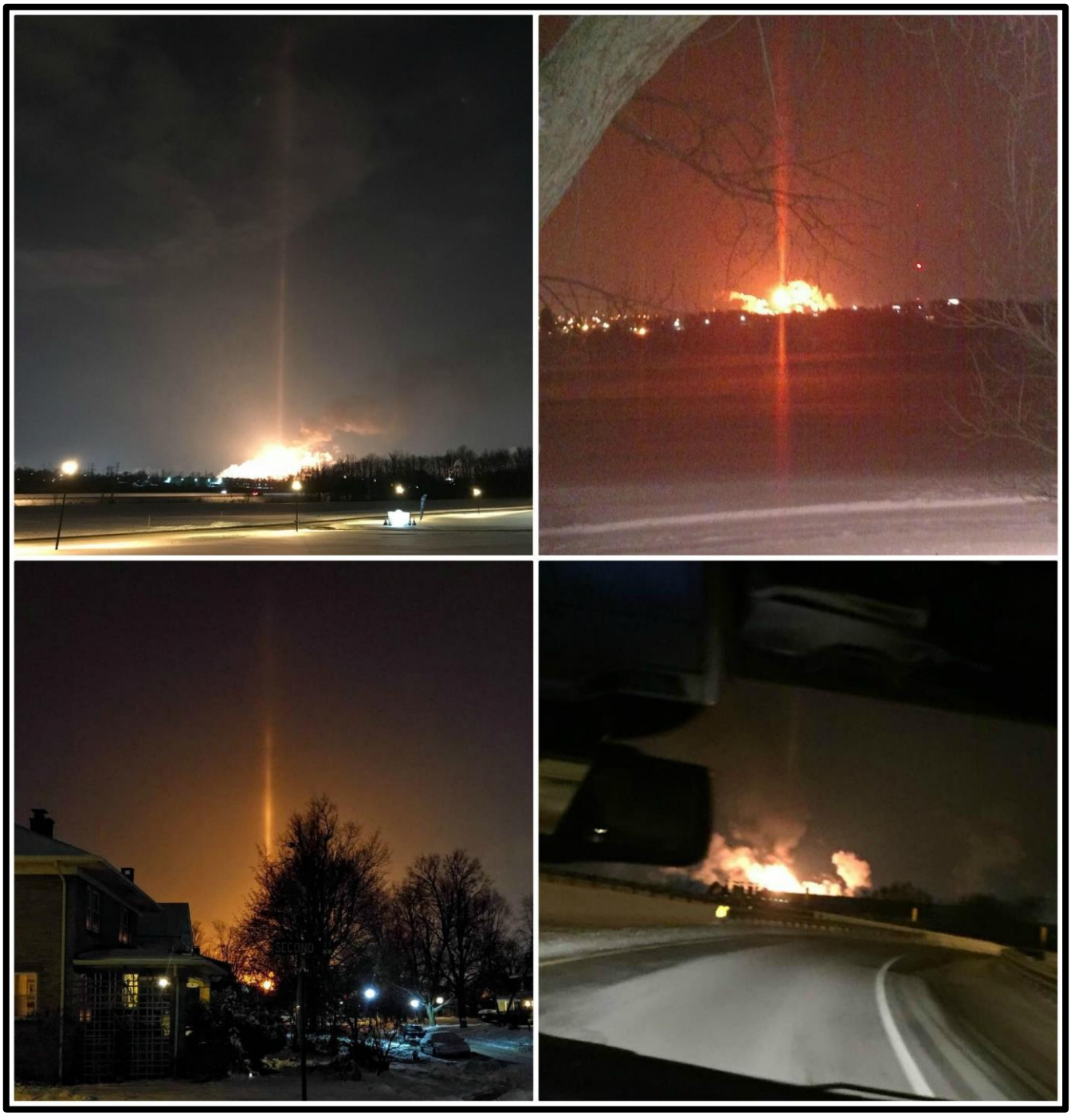
“We microwaved Catholics in Northern Ireland to make them sick, it goes on all over the world. It’s a weapon that you don’t know your being targeted with because the doses are very low which is actually more dangerous than a high dose.”



100-KILOWATT LASER WEAPON VEHICLE BUILT BY DYNETICS-LOCKHEAD.

US AIR FORCE BOEING 747 AIRBORNE DIRECT ENERGY LASER WEAPON

CALIFORNIA WILD FIRES WERE STARTED BY DIRECT ENERGY WEAPONS



HOW COULD A “WILD FIRE” DO THIS?

Even the head of Cal Fire for the state said on CNN he had no idea what started the over 60 strikes that came out of nowhere in the middle of the night without warning. Sudden, unexplainable winds kicked up to 60-70 mph, blue flashes and sparks were seen above by many, including me. Cars were torched, yet trees untouched. Homes were reduced to unrecognizable rubble....

California Fires – DEW – Directed Energy Weapons

https://www.aircrap.org/2017/10/13/california-fires-dew-directed-energy-weapons/

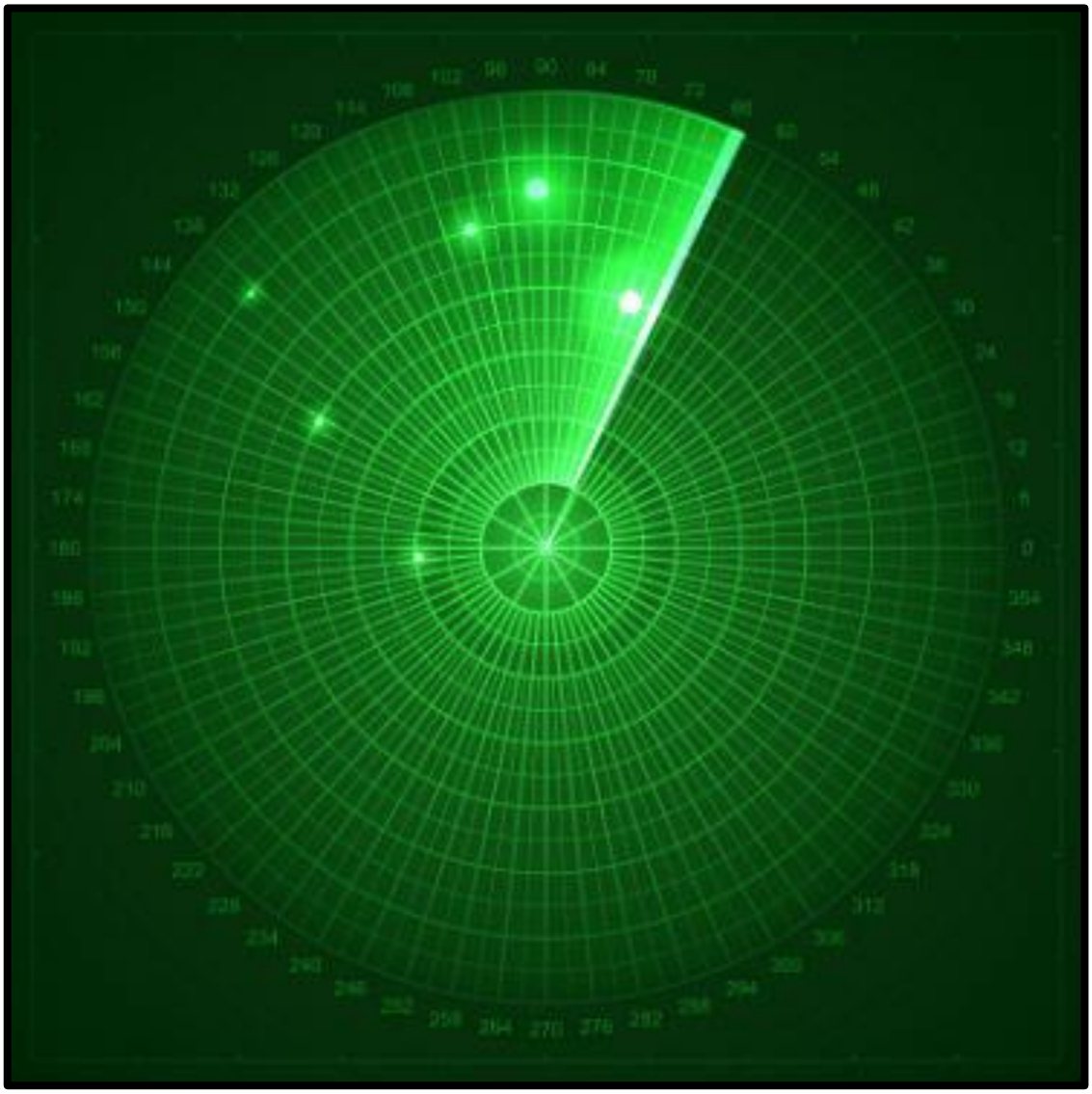
Elana Freeland – Yes, this is the EXACTITUDE OF DESTRUCTION offered by AI (artificial intelligence) – run directed energy weapons attacks dependent upon our ionized, electrified atmosphere: structures gone, trees intact. For the military mind, it's impressive, indeed. All the nano-aluminum particles in the buildings and soil after years of drought, years of chemical trails overhead, not to mention the plasma "cloud cover" laid 3 days in advance of this debacle . . . This is the face of modern tactical warfare in service to disaster capitalism and globalist fat cats. Were kings better than CEOs and interlocking corporate boards? At least the majority of kings loved their country and took pride in their people.

HOW COULD A “WILD FIRE” LEAVE SOME CARS AND HOUSES DESTROYED AND OTHERS NOT?

SINCE WHEN DO TREES BURN FROM THE INSIDE OUT?

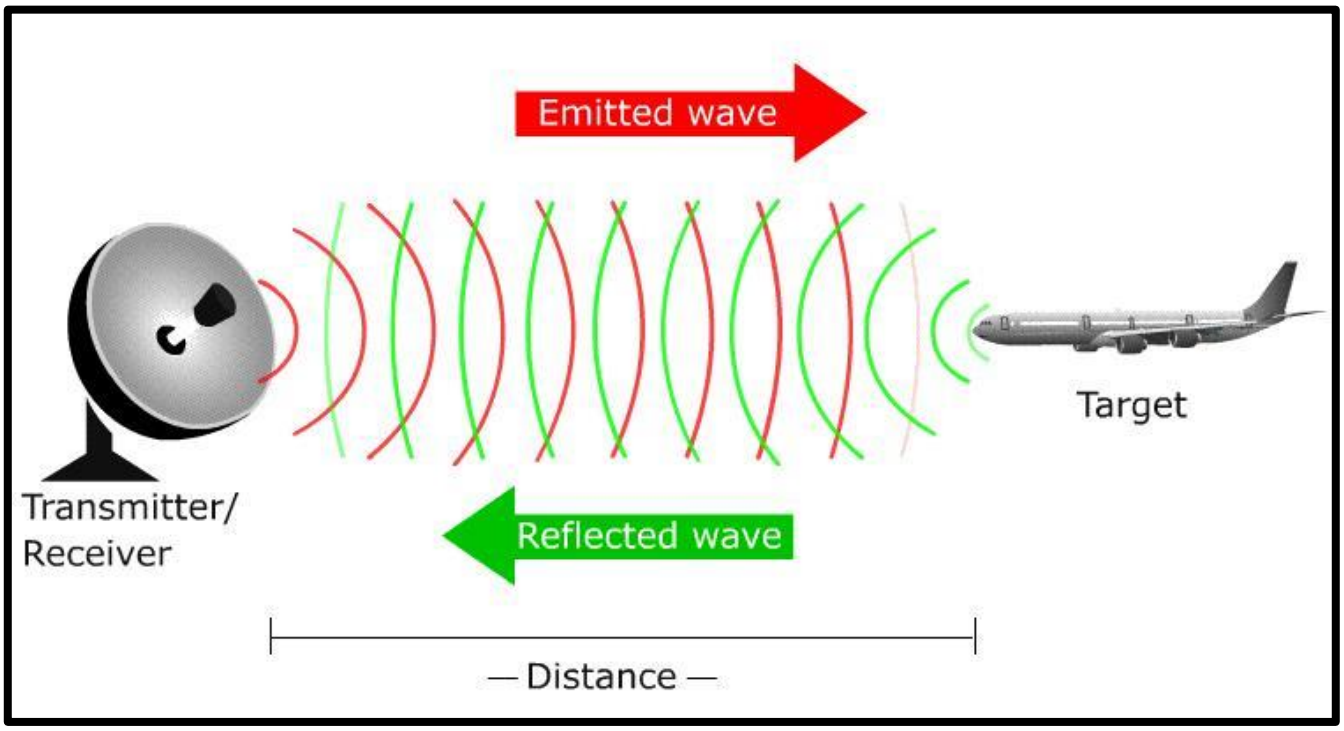
http://www.chemtrailplanet.com/DEW.html

RADAR



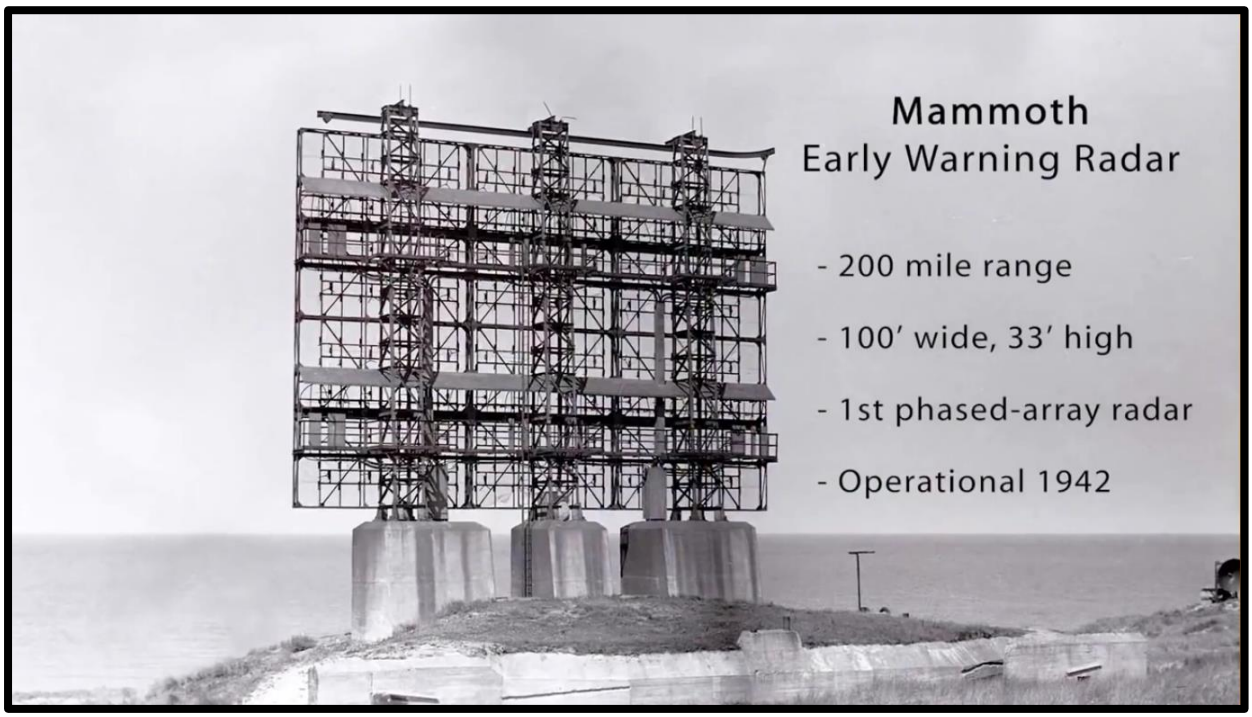
Radar is an acronym for “radio detection and ranging”. Radar works using MICROWAVES which allows us to “see” or “map” our environment.

Radar works by sending short bursts of microwaves in a specific direction in order to detect objects and determine their range (or location).



When the microwave pings off an object the signal is bounced back or reflected to where it came from. Then highly sensitive antennas are able to determine the size, shape and location of each object in the distance.

Radar was first used by the Germans in world war 2 as an early warning radar system under project Mammoth. Mammoth enabled the Germans to detect enemy movement from up to 200 miles away.

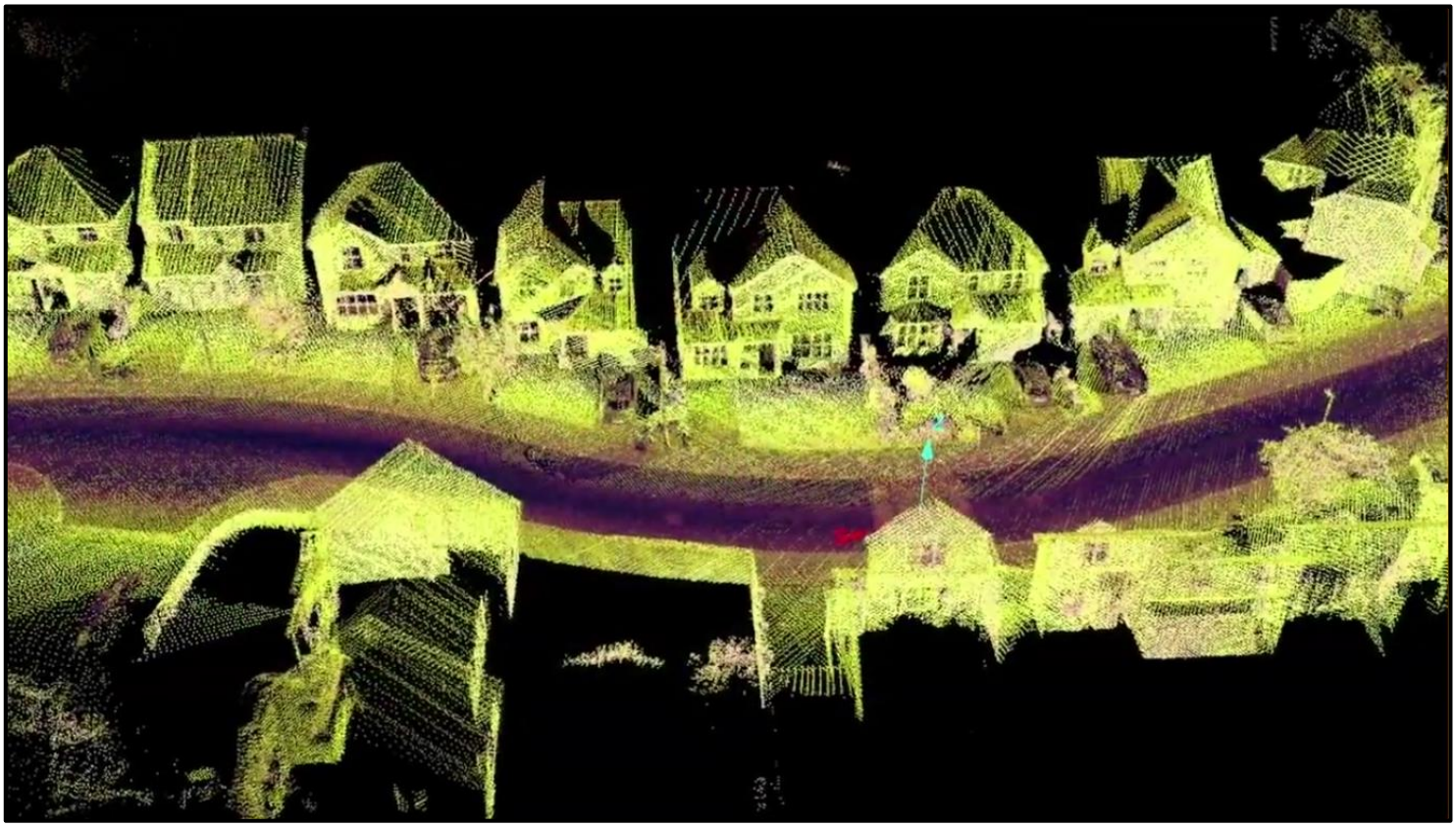


Therefore, because 5G works using microwaves and microwaves are used in the radar, this means the 5G frequency can used to 3D map its environment.

INCLUDING YOUR HOME

THIS IS UNLAWFUL AND A COMPLETE VIOLATION OF YOUR RIGHT TO PRIVACY

LET THAT ONE SINK IN FOR A MOMENT



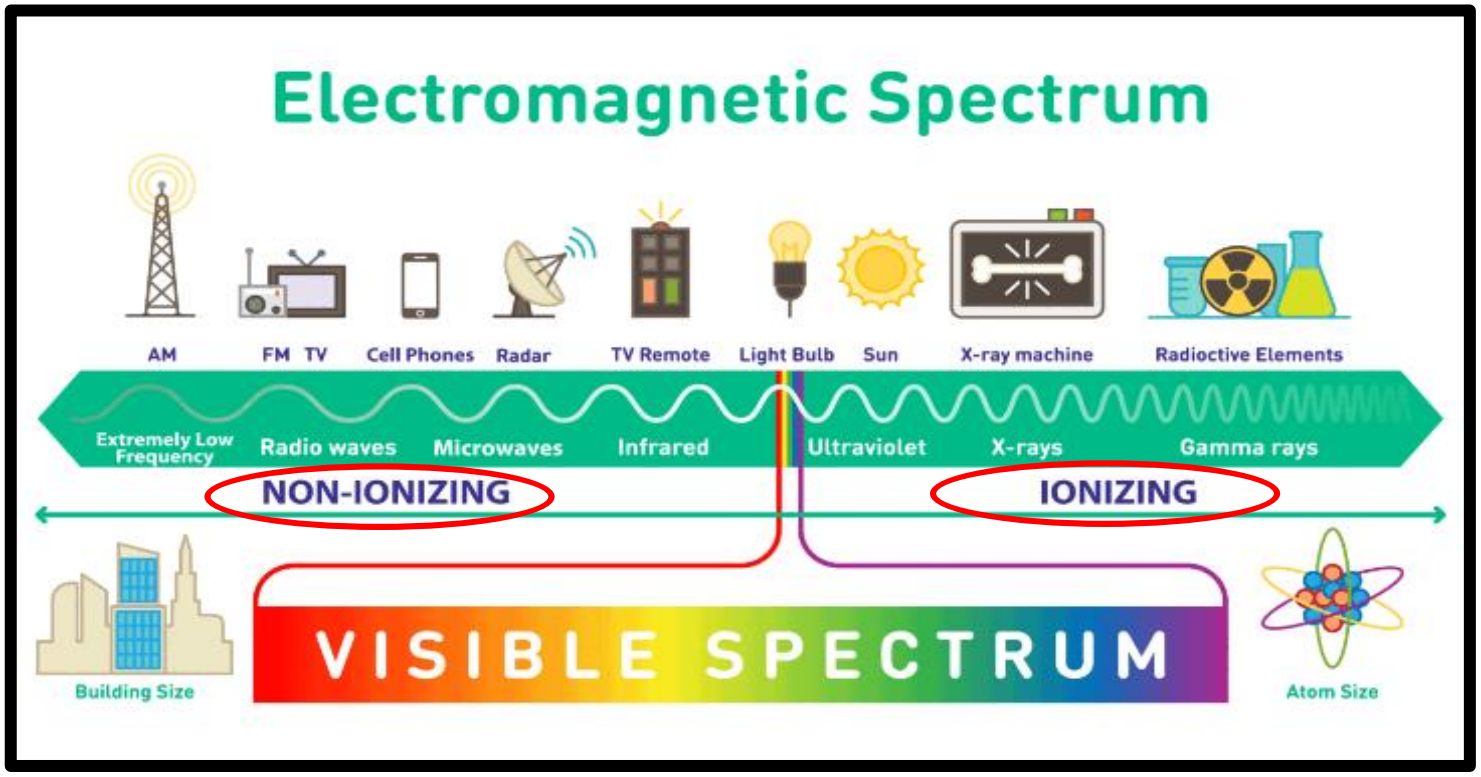
MICROWAVES AND RADIATION

Now we understand what microwaves are, how they work and what there capable of, lets look at what they produce.

MICROWAVES EMIT RADIATION

Radiation definition – "The emission of energy as electromagnetic waves or as moving subatomic particles, especially high energy particles which cause IONIZATION"

Ionization definition – "Ionization is the process by which an atom or molecule acquires a negative or positive charge by gaining or losing electrons, often in conjunction with other chemical changes. The resulting electrically charged atom or molecule is called an ion."



On the radio frequency spectrum there are two types of radiation – ionizing and nonionizing.

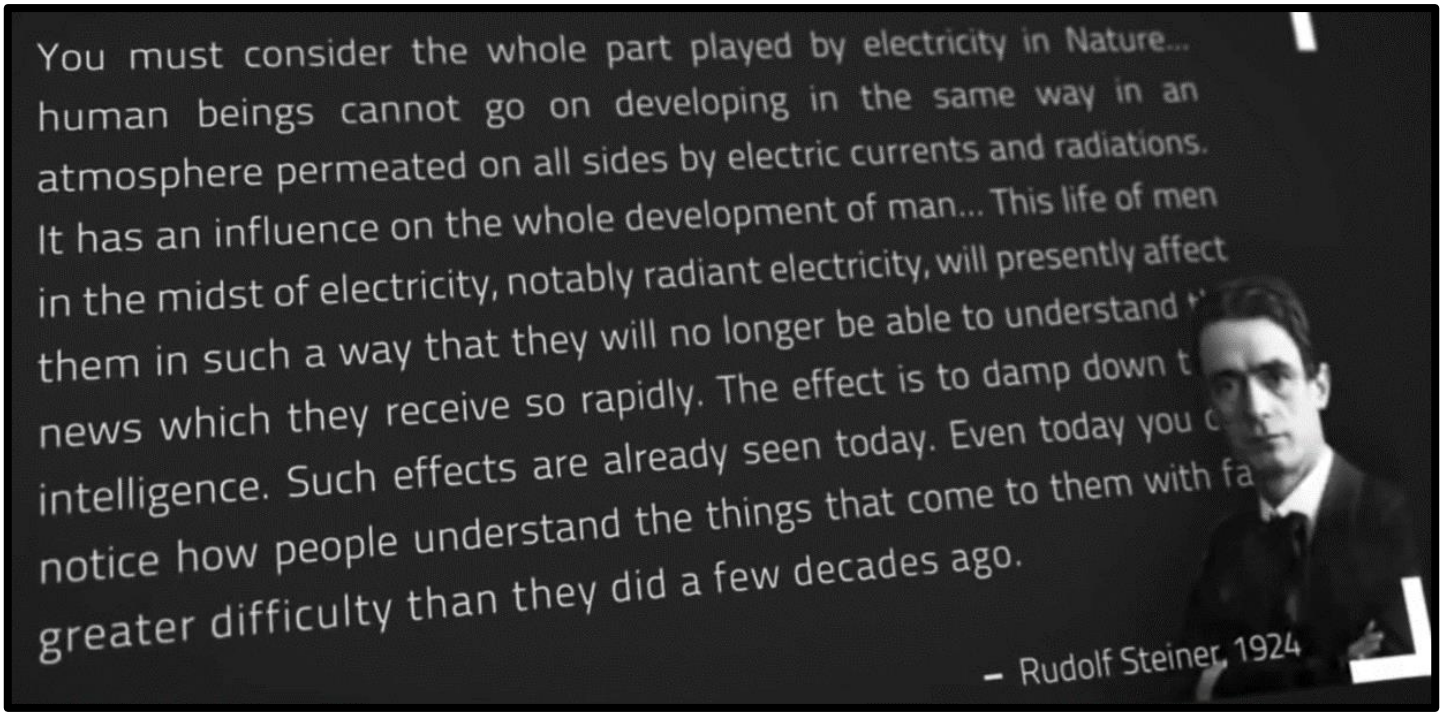
Safety studies have proven for absolute fact that both forms of radiation (ionizing and non-ionizing) destroy DNA and are extremely harmful to humans.

YOU MUST UNDERSTAND THAT YOU AND YOUR FAMILY ARE EXPOSED TO EMFS AND MICROWAVE RADIATION ON A DAILY BASIS

PHONES, LAPTOPS, TABLETS, WIRELESS ROUTERS, WIRELESS BABY MONITORS, MOBILE PHONE TOWERS, ANYTHING THAT IS WIRELESS IS RADIATION

EVERYDAY YOU ARE BATHED IN THIS ELECTROMAGNETIC SOUP THAT IS DESTORYING YOUR DNA AND SLOWLY KILLING YOU AND THE PLANET

ITS VITAL YOU UNDERSTAND WHATS REALLY GOING ON SO YOU CAN TAKE ACTION AGAINT THE INSANE AGENDA WHICH IS 5G AND THE IOT


You must consider the whole part played by electricity in Nature... human beings cannot go on developing in the same way in an atmosphere permeated on all sides by electric currents and radiations. It has an influence on the whole development of man... This life of men in the midst of electricity, notably radiant electricity, will presently affect them in such a way that they will no longer be able to understand
news which they receive so rapidly. The effect is to damp down t
intelligence. Such effects are already seen today. Even today you
notice how people understand the things that come to them with fa
greater difficulty than they did a few decades ago.
– Rudolf Steiner, 1924

DDees.com

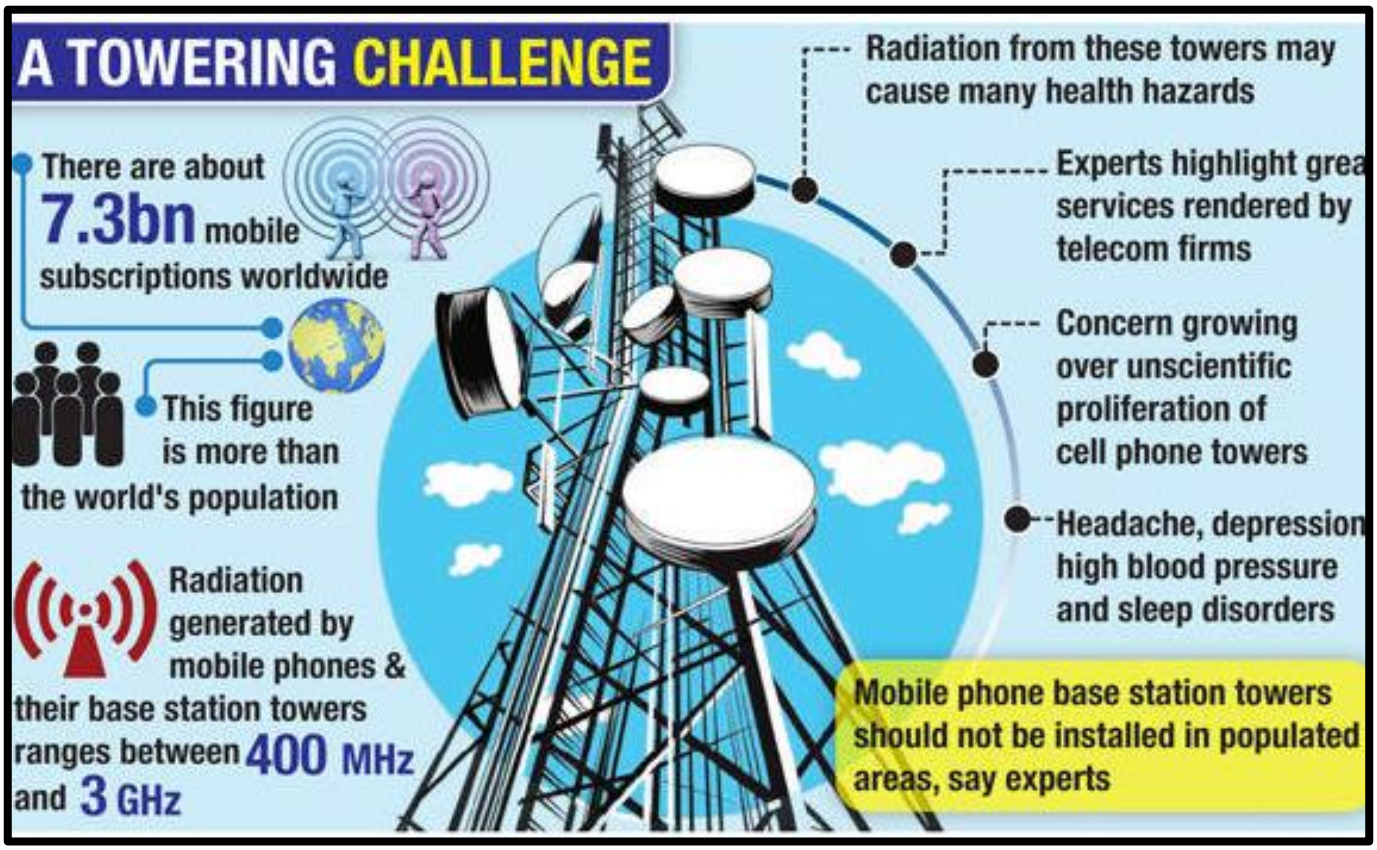
THE 5G INFRASTRCUTURE

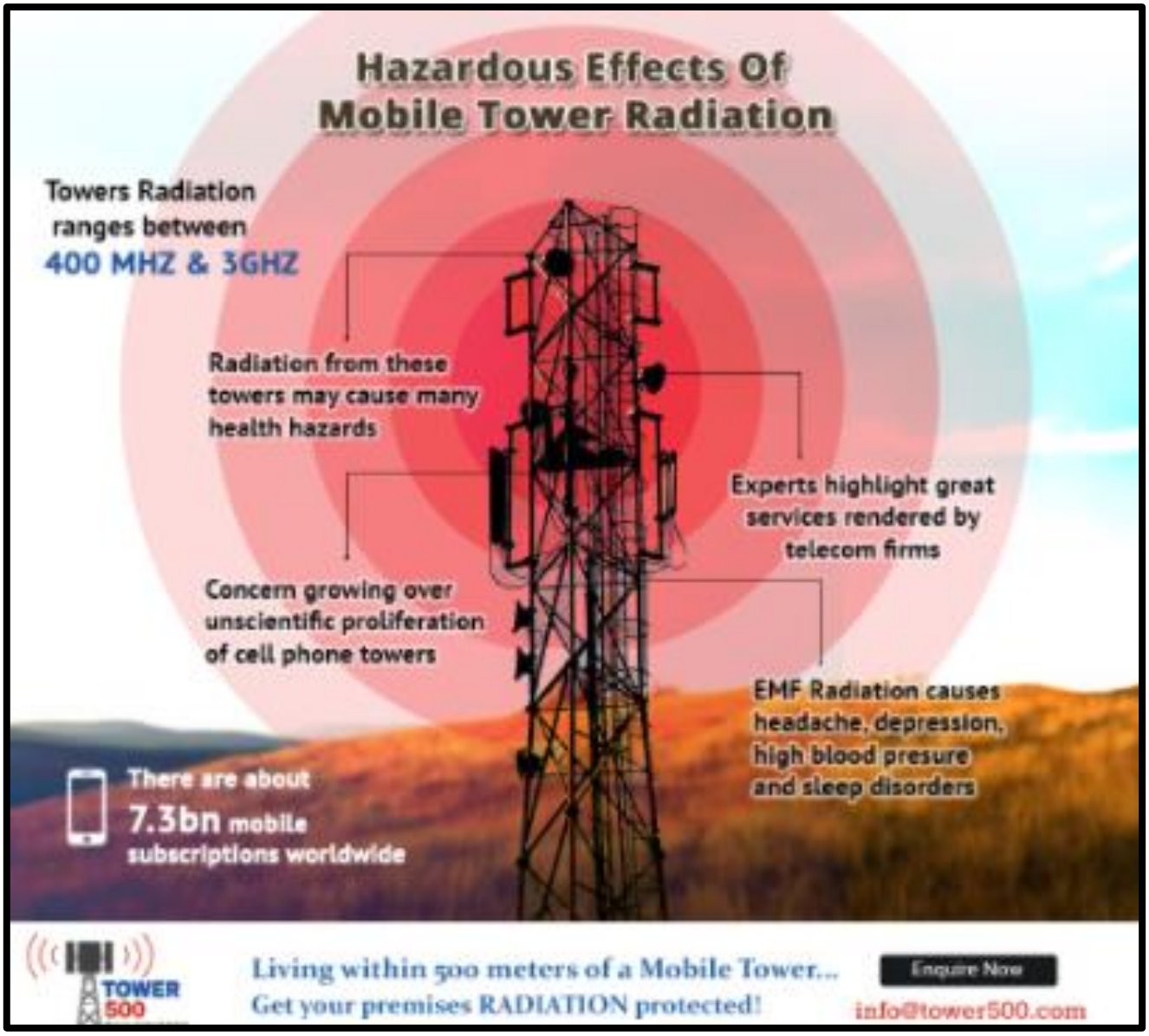
The 5G infrastructure refers to the physical towers that make the 5G network possible. 5G cannot operate without this huge network of mobile phone towers and transmitters.

This is because 5G uses microwaves and microwaves are short millimetre waves on the radio frequency spectrum. In layman's terms the signal is too short to travel long distances and must be bounced from mast to mast in order stay online and work to 100% capacity.

THE ONLY WAY TO STOP 5G IS TO DESTROY THE INFRASTRUCTURE

MOBILE PHONE TOWERS

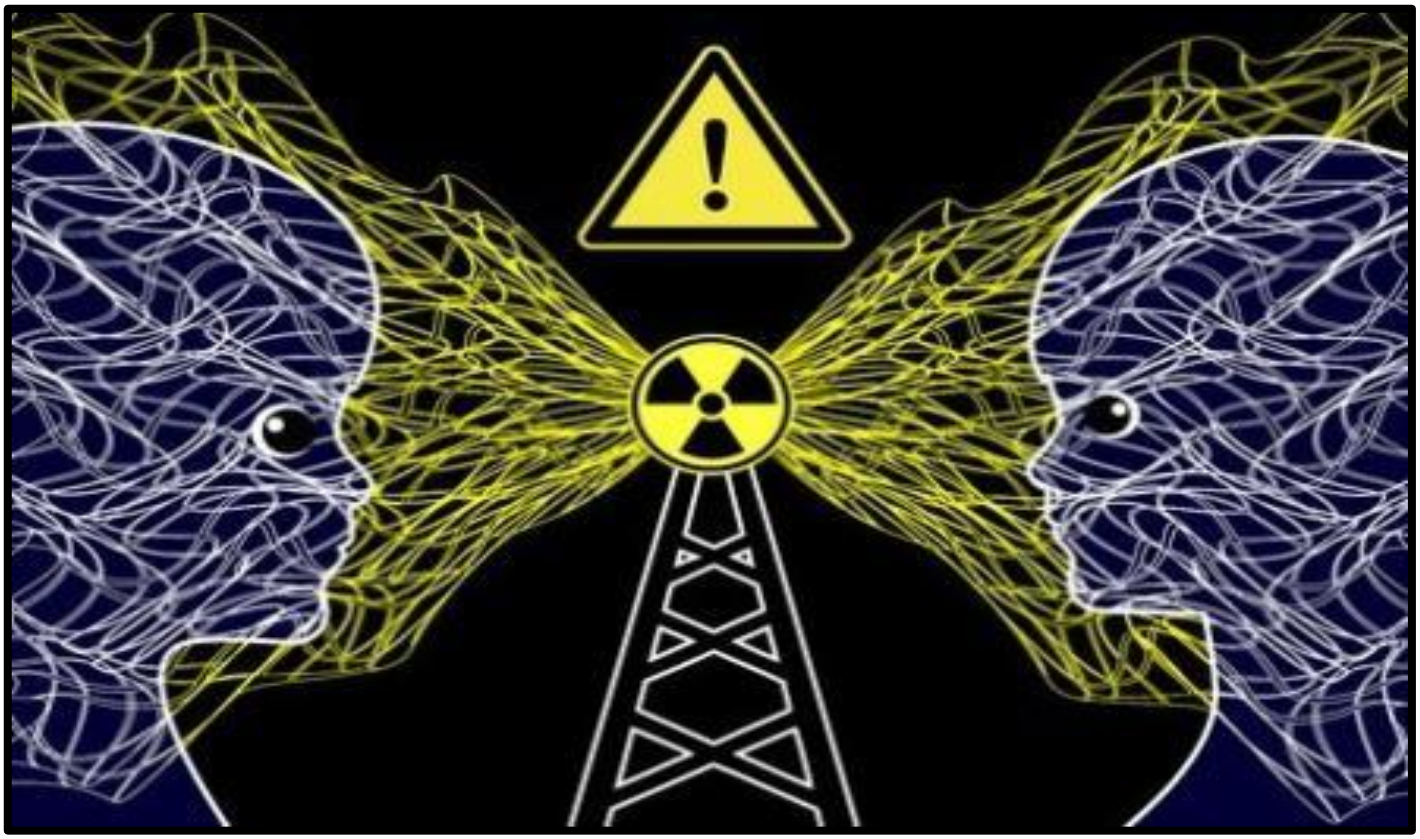

A TOWERING CHALLENGE
There are about 7.3bn mobile subscriptions worldwide
This figure is more than the world's population
Radiation generated by mobile phones & their base station towers ranges between 400 MHz and 3 GHz
Radiation from these towers may cause many health hazards
Experts highlight grea services rendered by telecom firms
Concern growing over unscientific proliferation of cell phone towers
Headache, depression high blood pressure and sleep disorders
Mobile phone base station towers should not be installed in populated areas, say experts


Hazardous Effects Of
Mobile Tower Radiation
Towers Radiation
ranges between
400 MHZ & 3GHZ
Radiation from these
towers may cause many
health hazards
Experts highlight great
services rendered by
telecom firms
Concern growing over
unscientific proliferation
of cell phone towers
EMF Radiation causes
headache, depression,
high blood presure
and sleep disorders
There are about
7.3bn mobile
subscriptions worldwide
TOWER
500
Living within 500 meters of a Mobile Tower...
Get your premises RADIATION protected!
Enquire Now
info@tower500.com

5G

BASE STATIONS

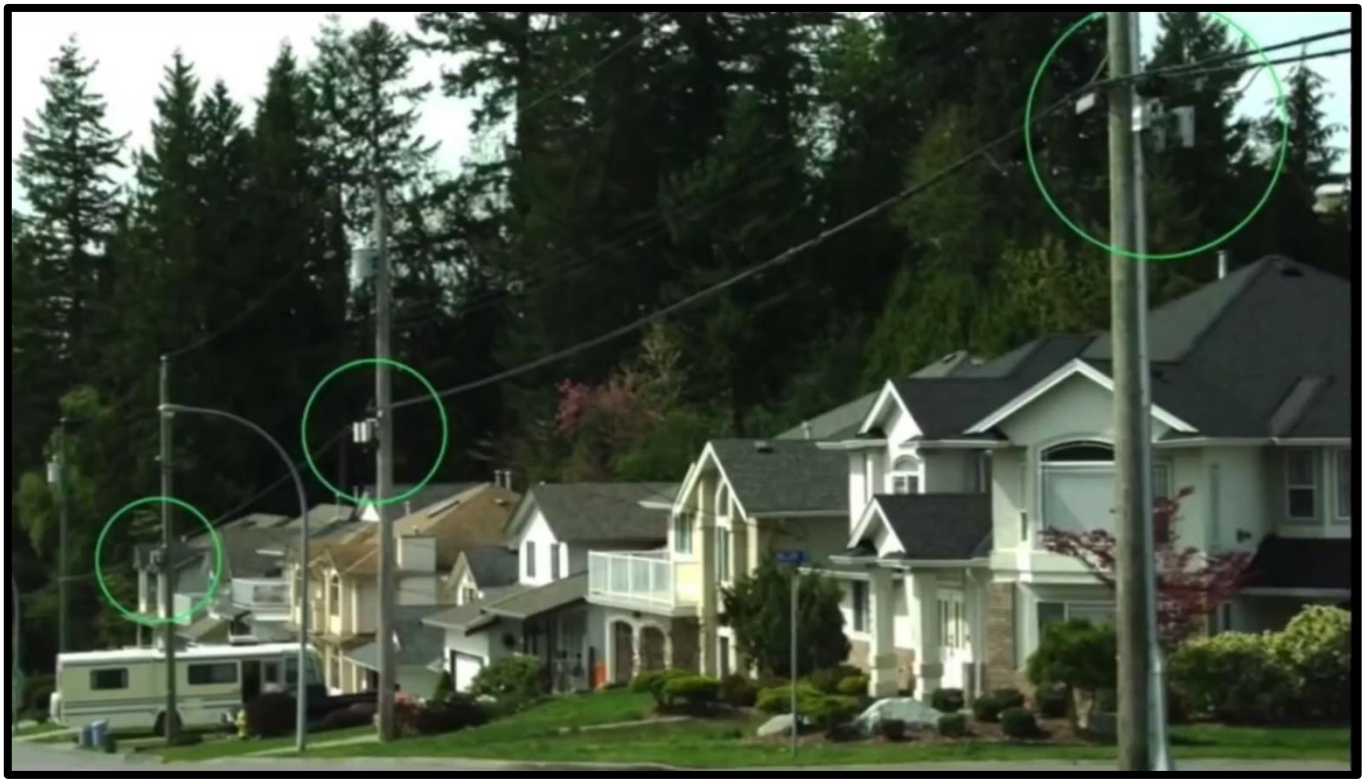
COURTESY: TAKE BACK YOUR POWER



5G ILLEGAL LED TRANSMTITTERS

Throughout the United Kingdom and the world street lights are being modified and fitted with 5G LED technology.

The antenna design on top of the street lights are masquerading as a CONTROL MANAGEMENT SYSTEM.

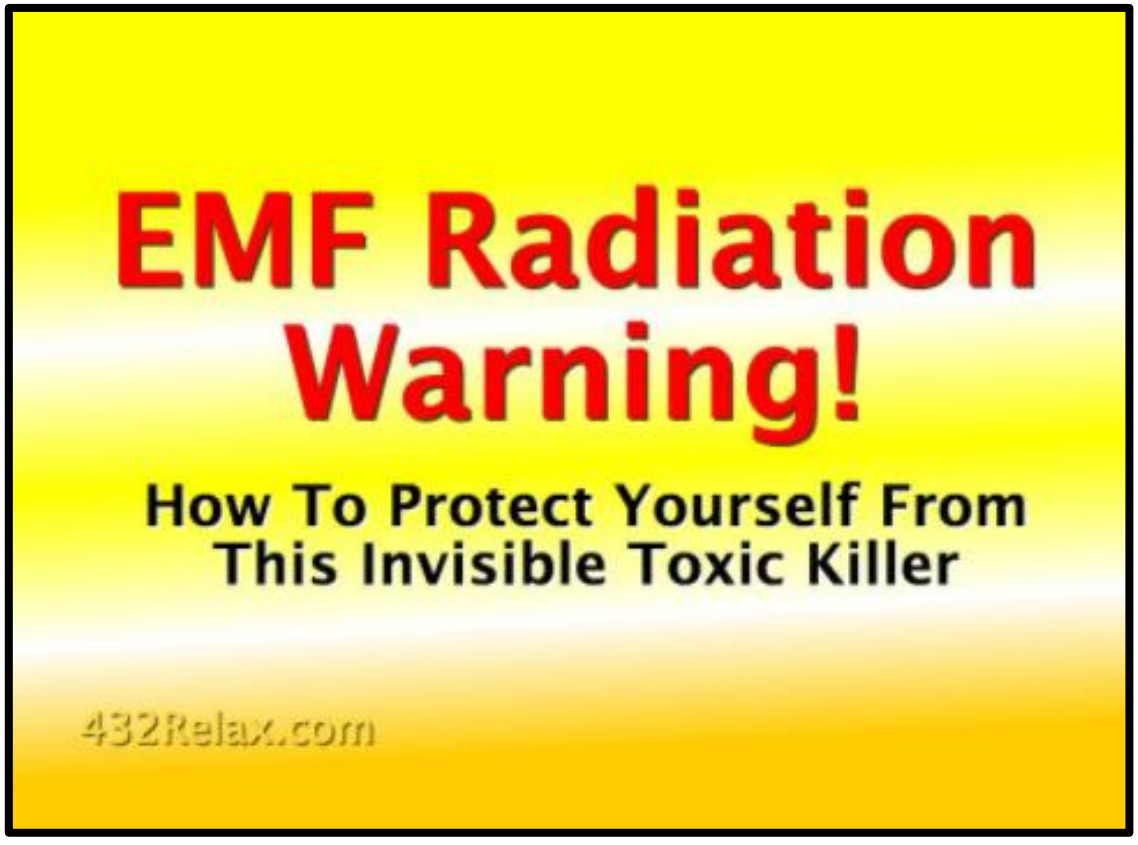


The supposed “safety guidelines” for microwave radiation as stated by the European Union is 600 millivolts.

Mark Steele has measured microwave radiation from transmitters on top of LED street lights in Gateshead with readings coming out at 3000 millivolts +!

THAT’S 5 TIMES HIGHER THAN THE SUPPOSED SAFETY LIMIT

PEOPLE HAVE REPORTED BLEEDING FROM THE NOSE REGULARY SINCE THE LED STREET LIGHTS WERE FITTED



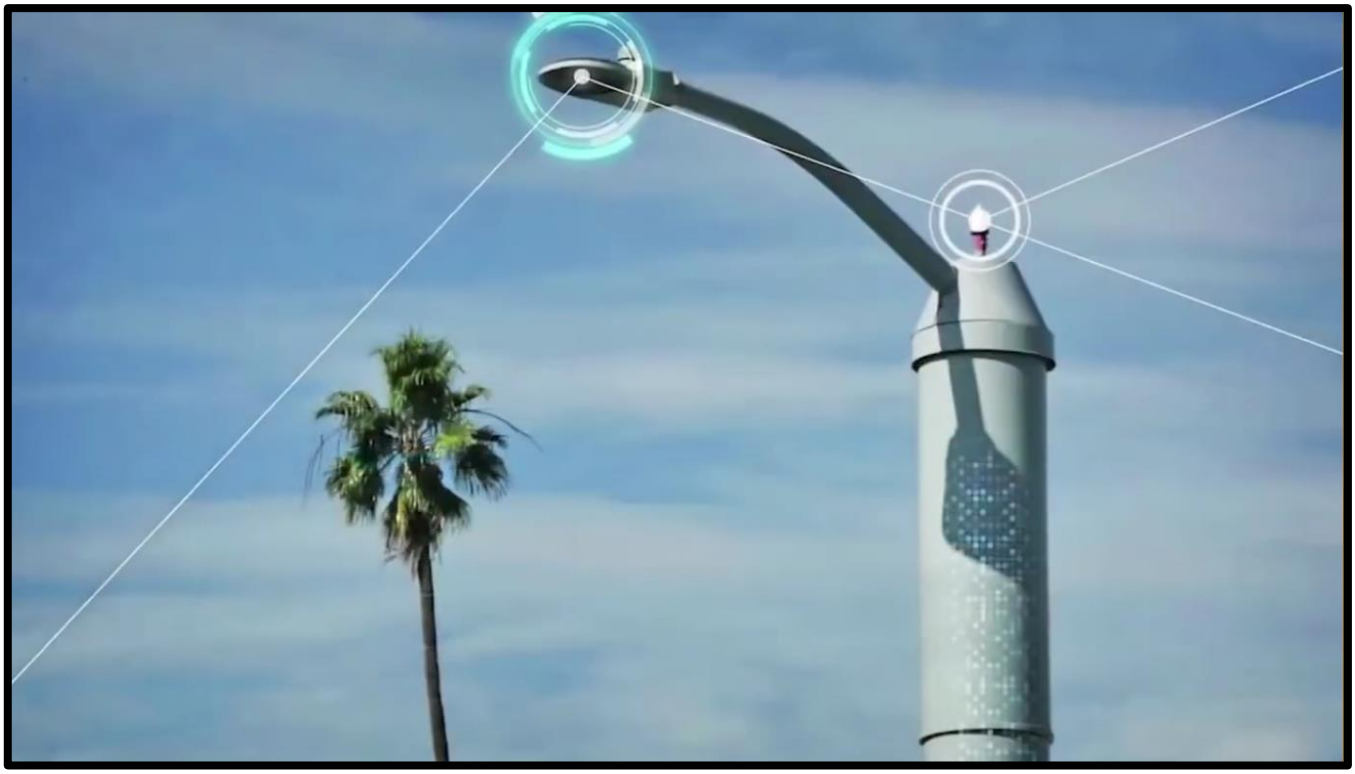
MARK STEELE

Mark Steele is a weapon system expert who has broke cover to expose 5G for what it is…
A KILLER.

The following information has been transcribed from the Sacha Stone documentary…

5G APOCALYPSE - 5G WILL BE THE DECIMATION OF HUMANITY

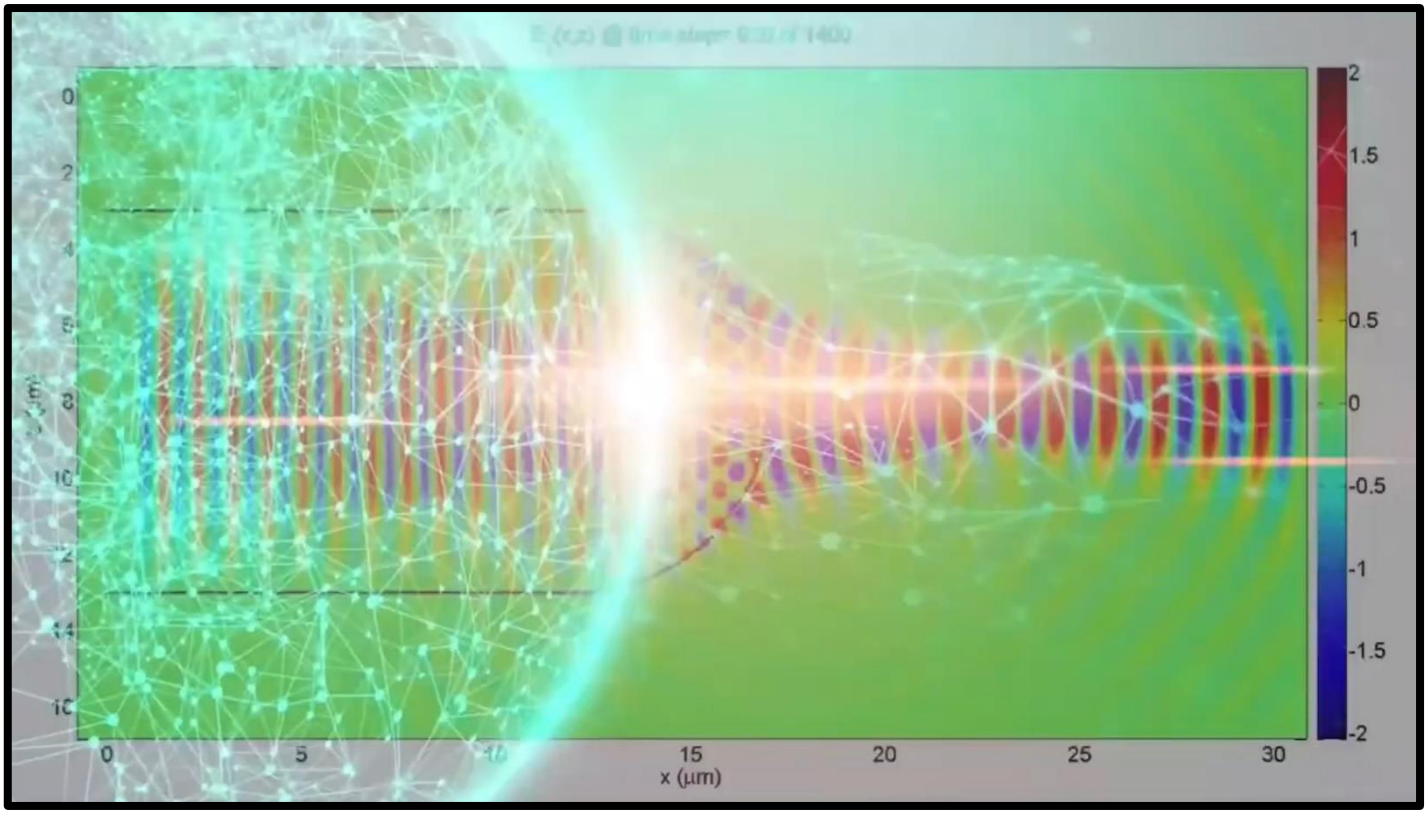
5G first and foremost is densification.



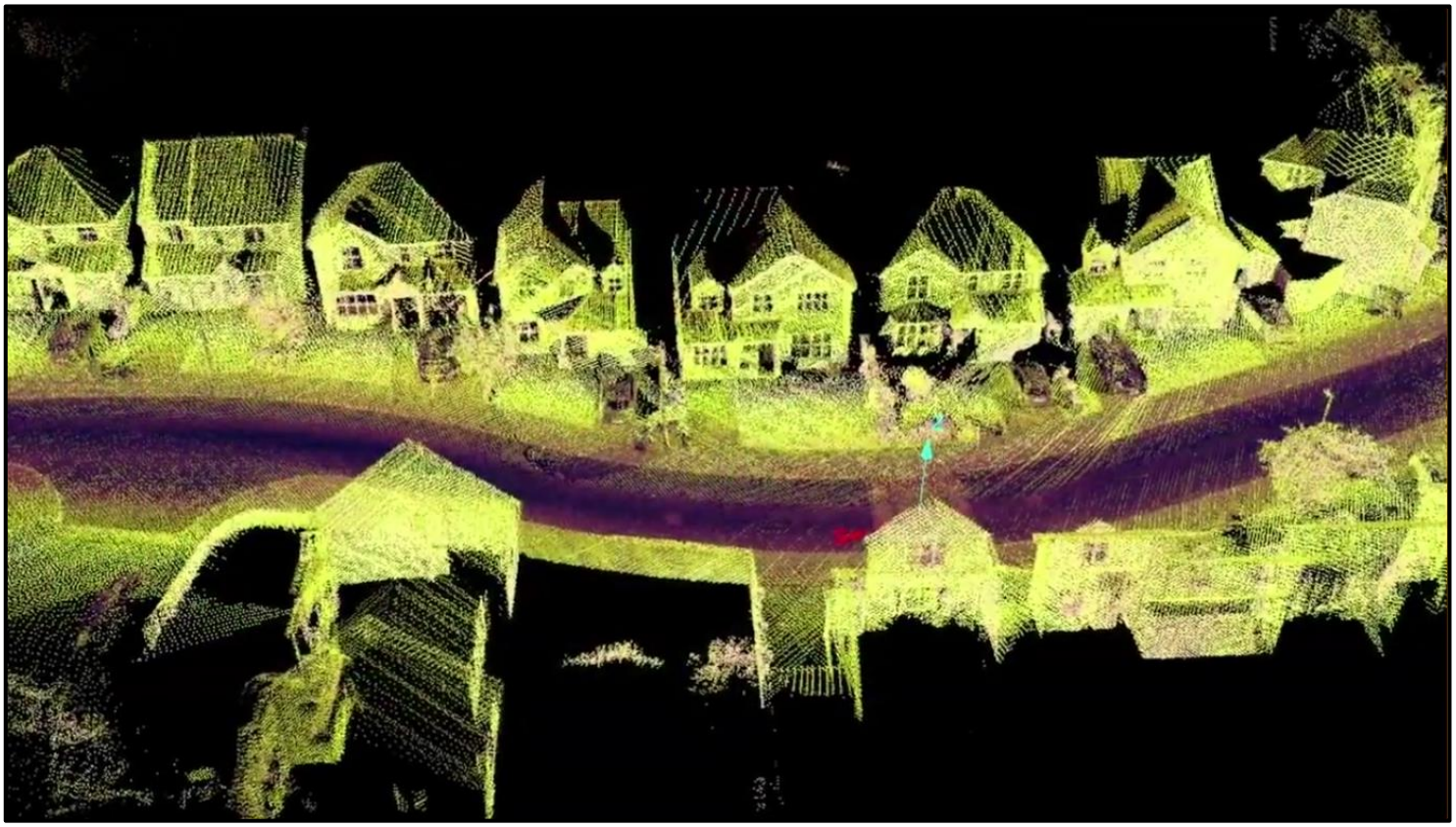
Densification definition "an increase in the density of something. Compaction, compression, concretion, concentration – increase in density."

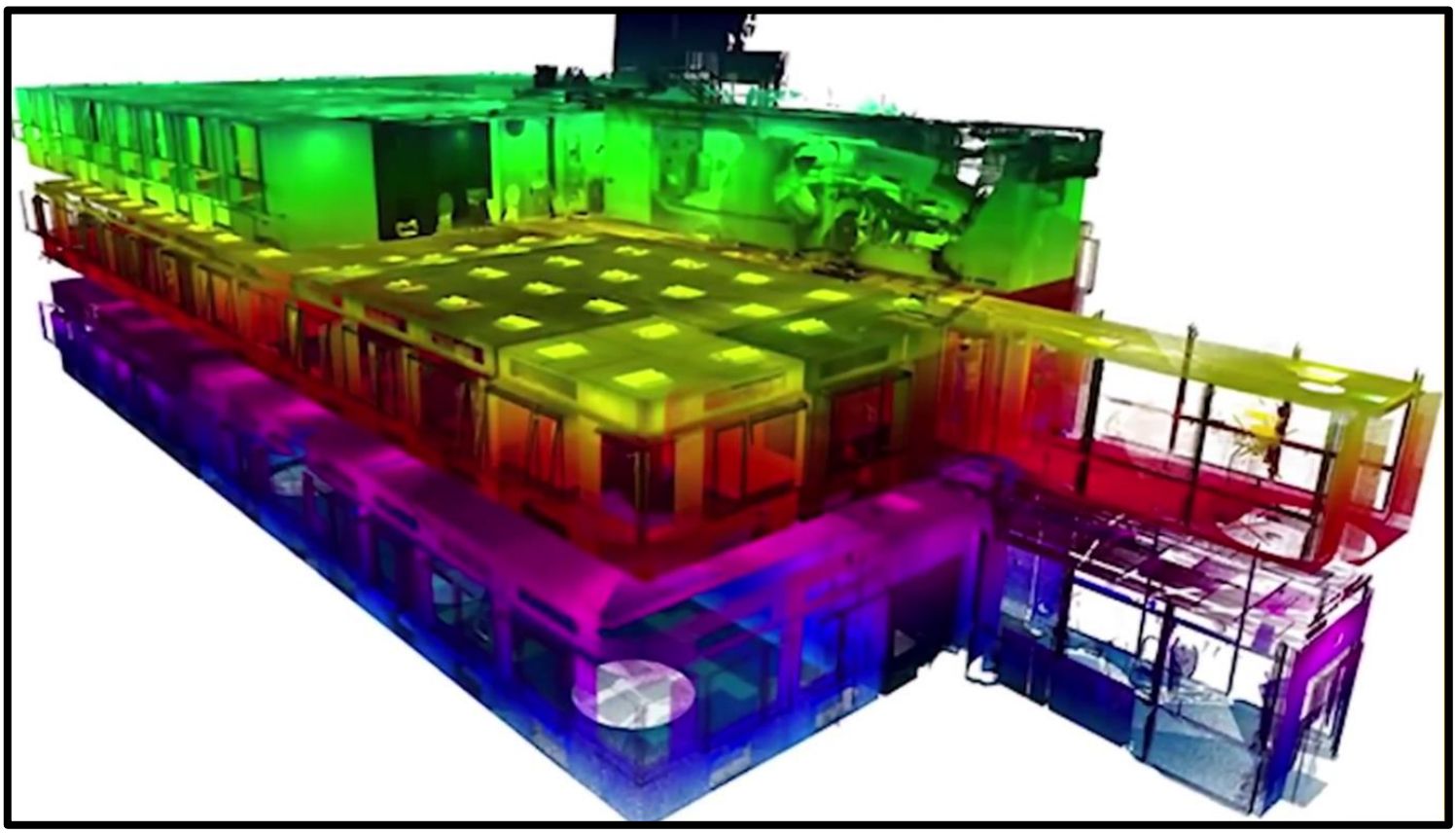
This means significantly more transmitters in close proximity to a human and it is also a SOPHISTICATED, ILLEGAL, UNLAWFUL TRANSMITTER.

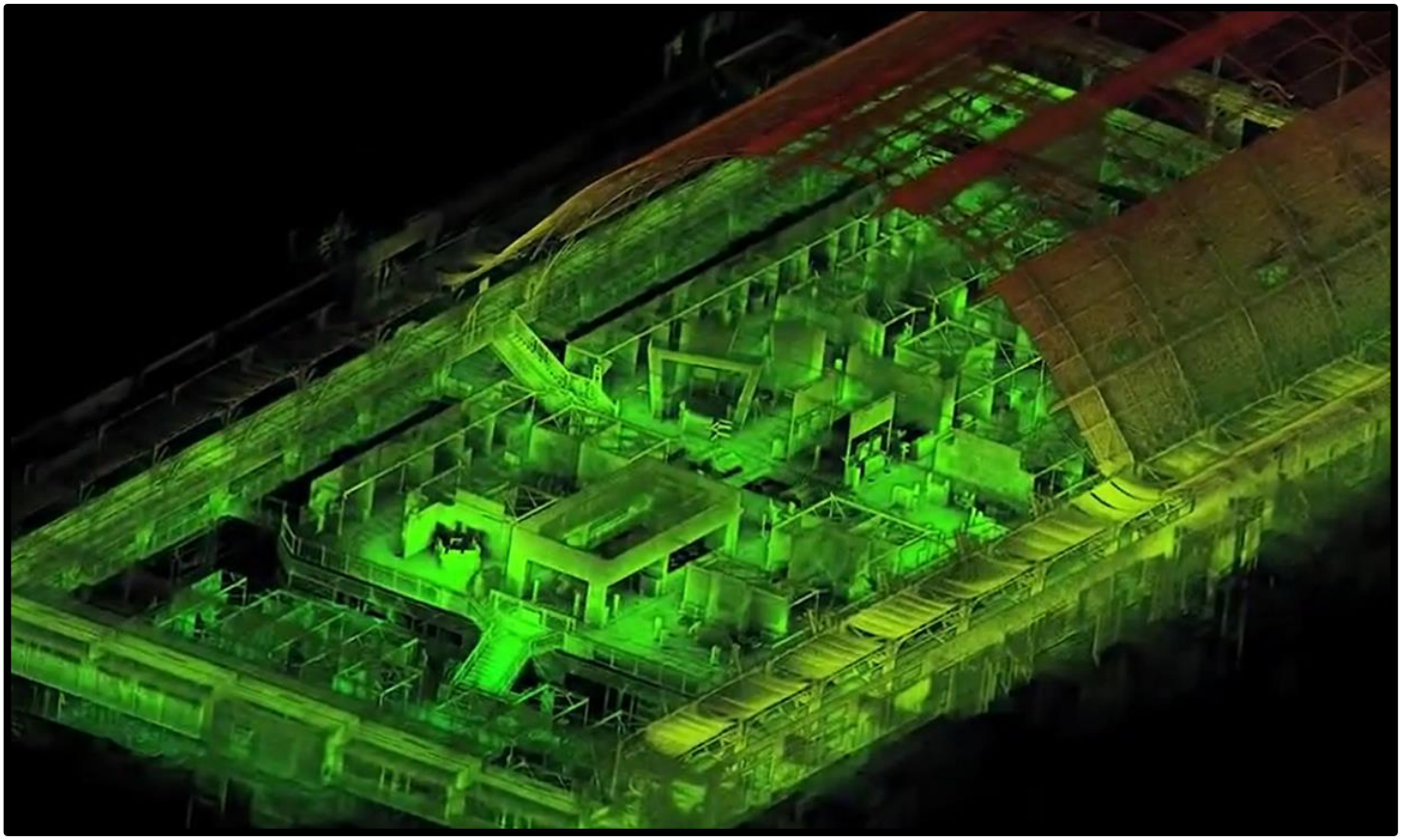
What I mean by that – IT IS A HIGH GAIN DIELECTRIC ATENNA

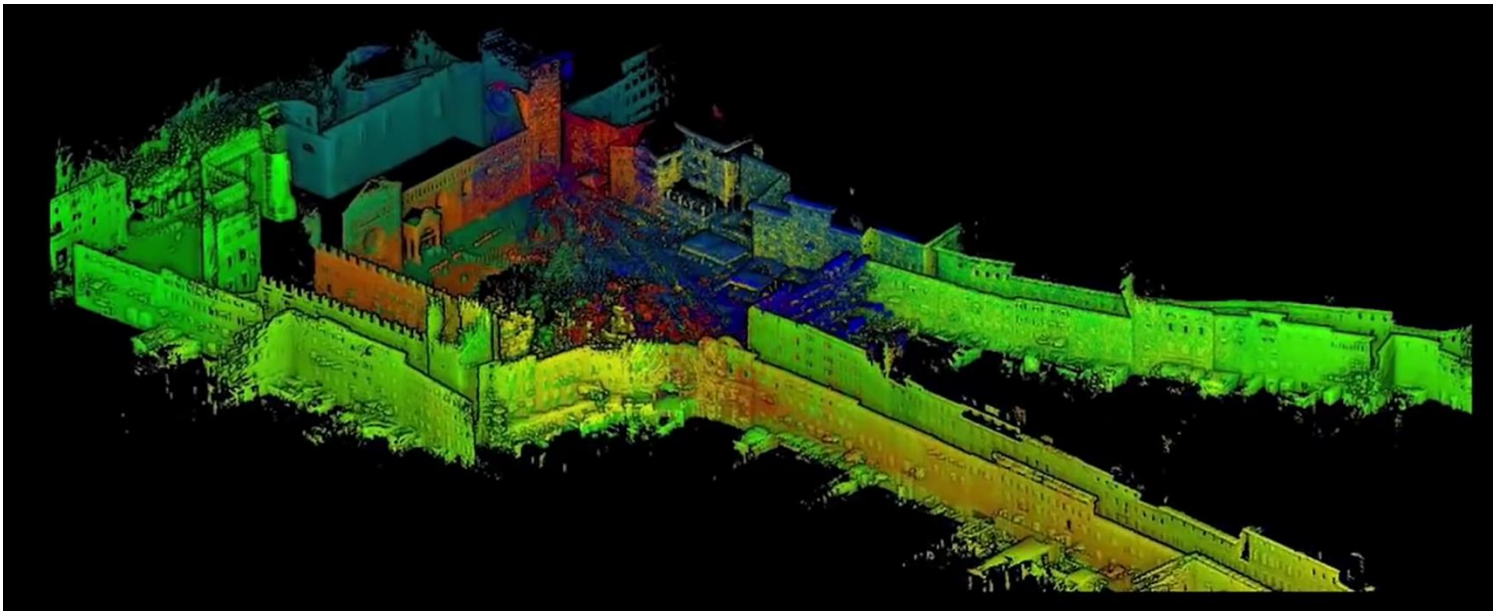

0
2
4
6
8
10
12
14
16
0
5
15
20
25
30
x (μm)
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2

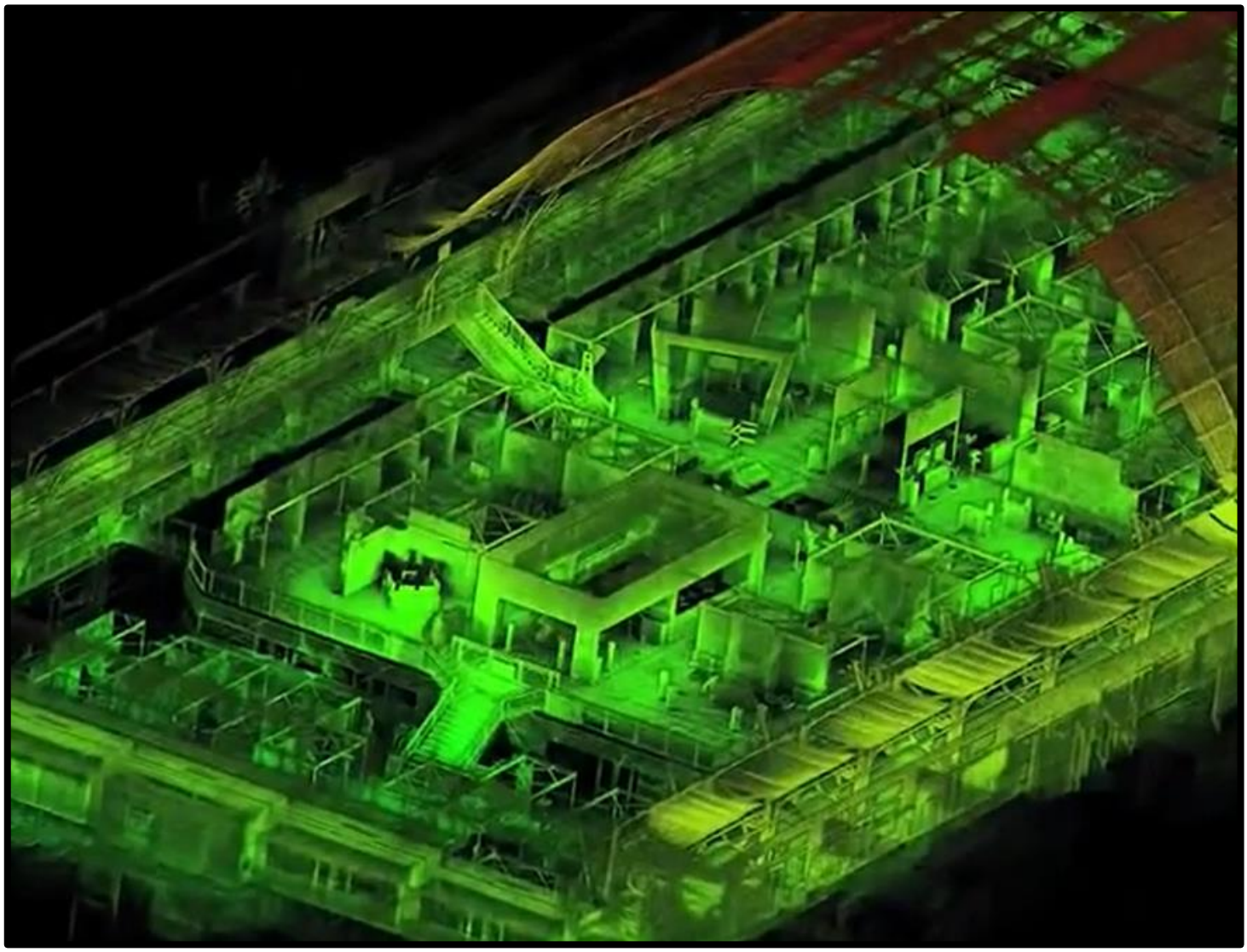
What that allows 5G transmitters to do is TO 3D MAP ITS ENVIROMENT INSIDE YOUR HOME.

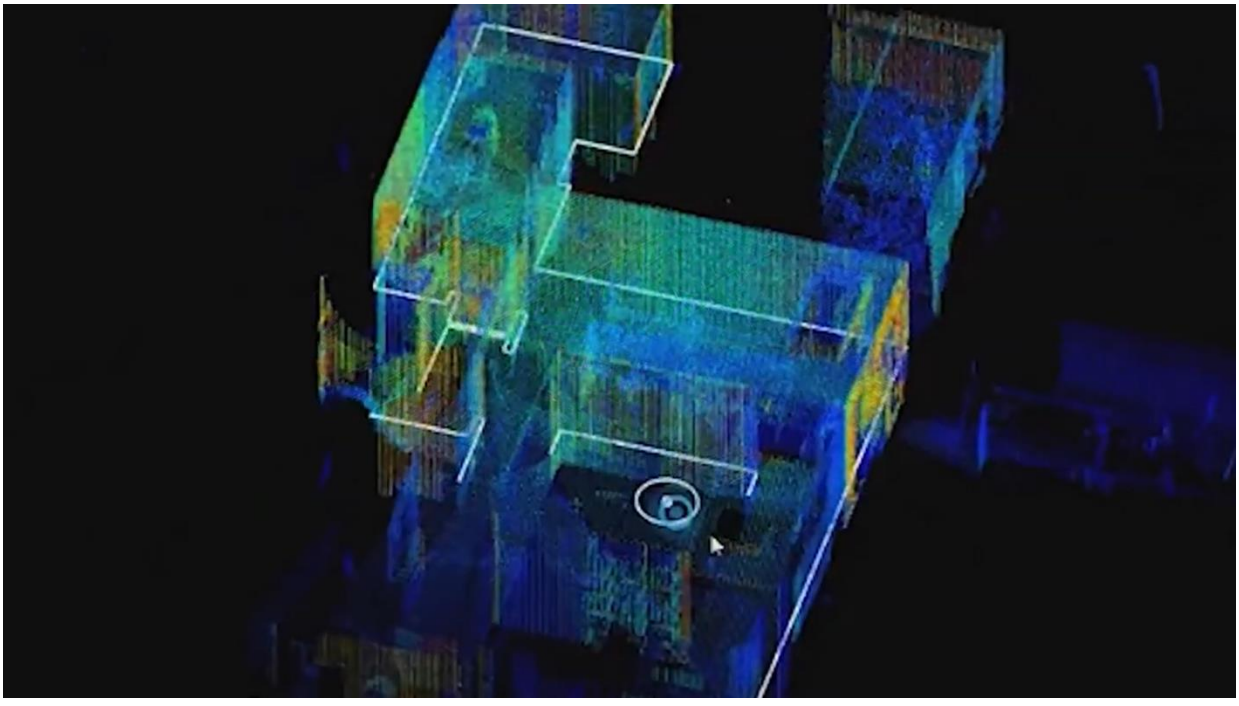


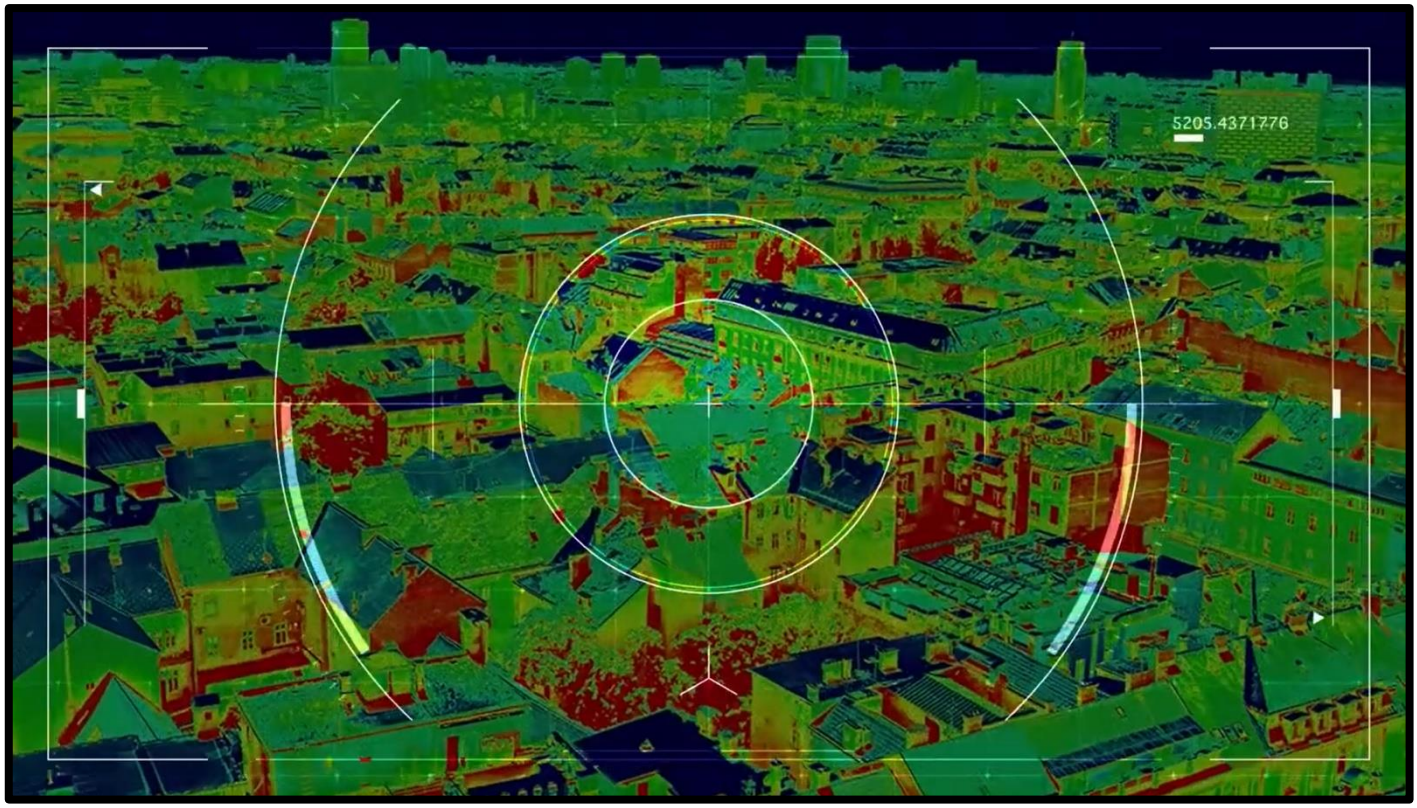








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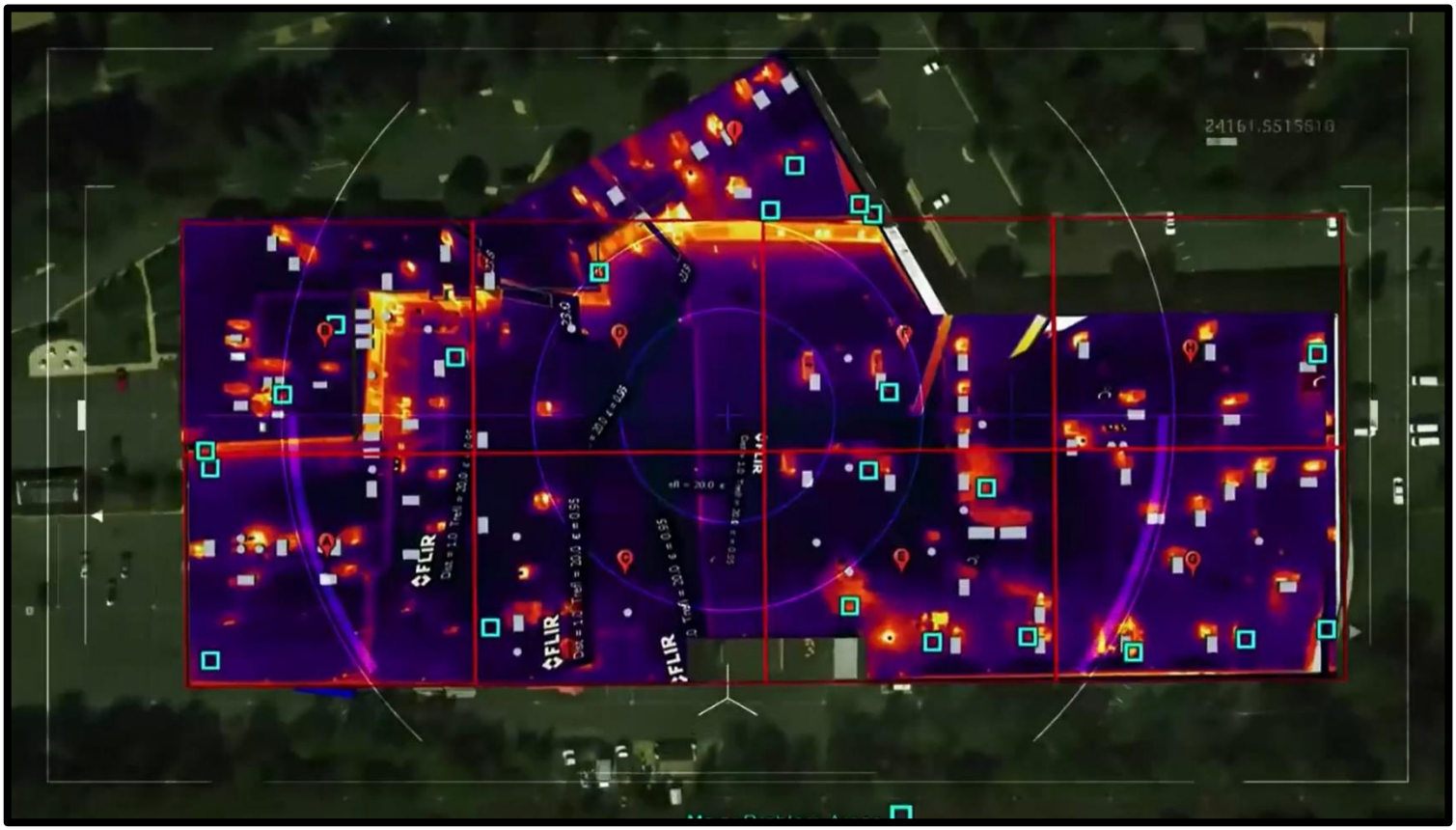
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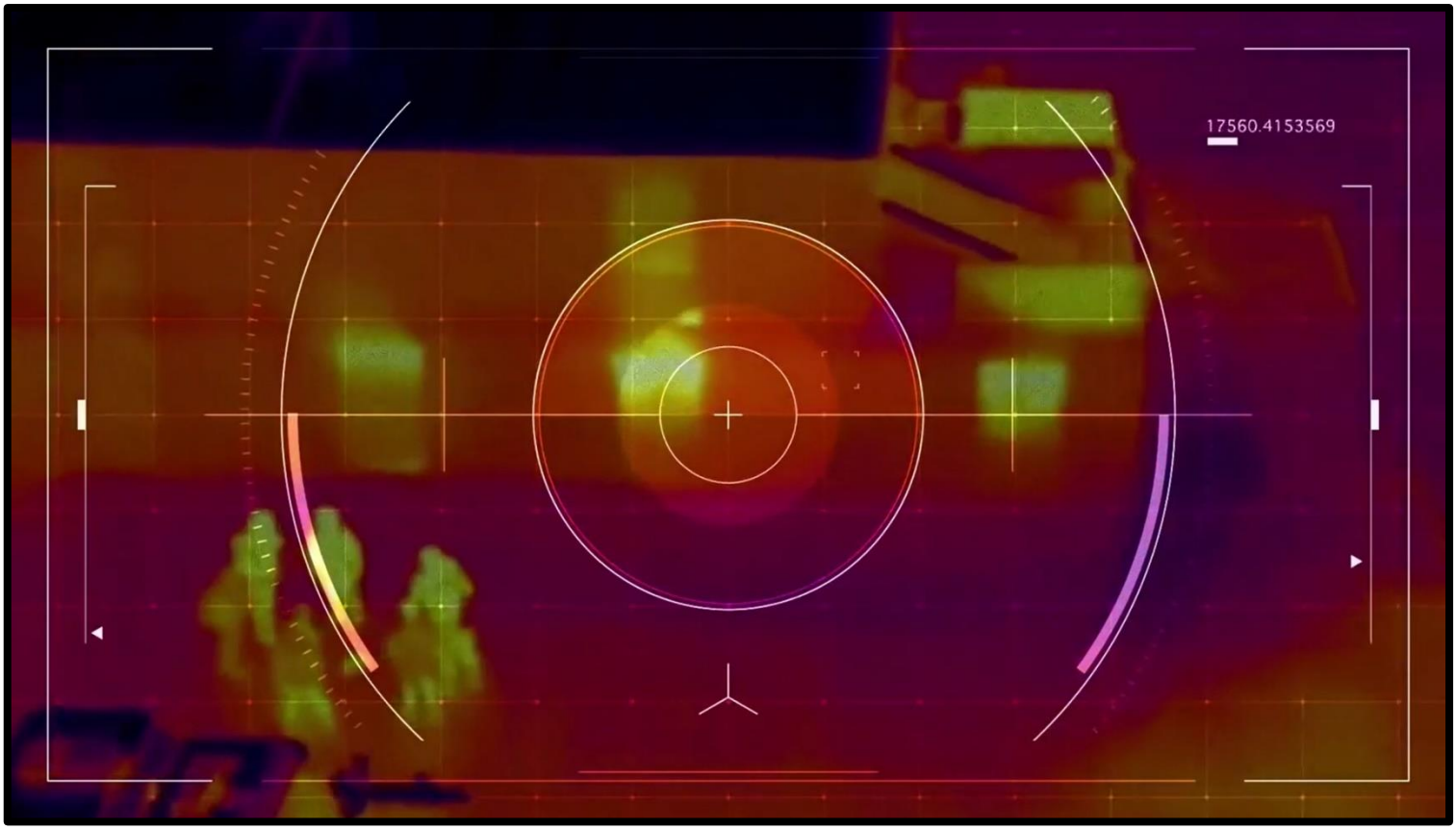
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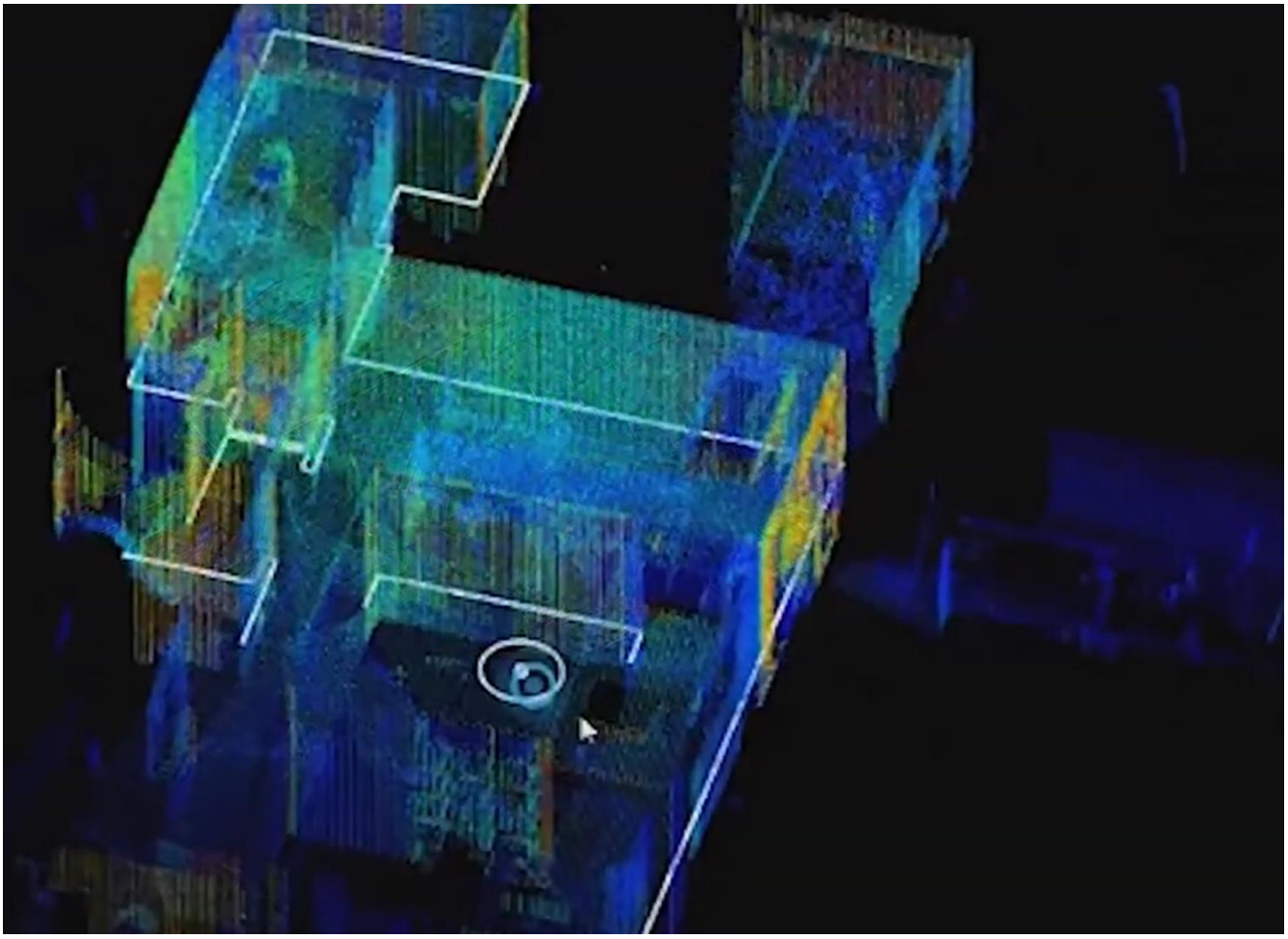
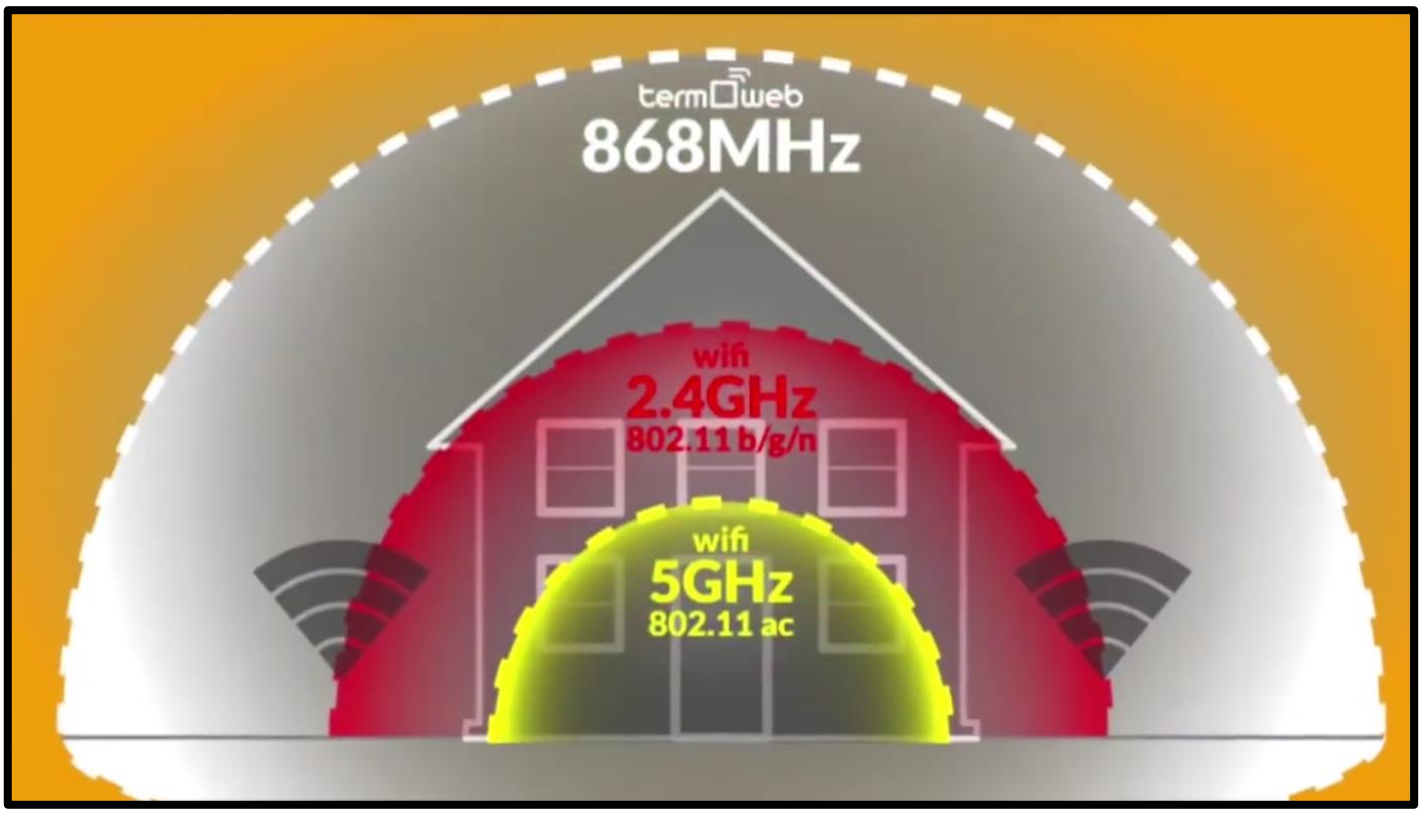
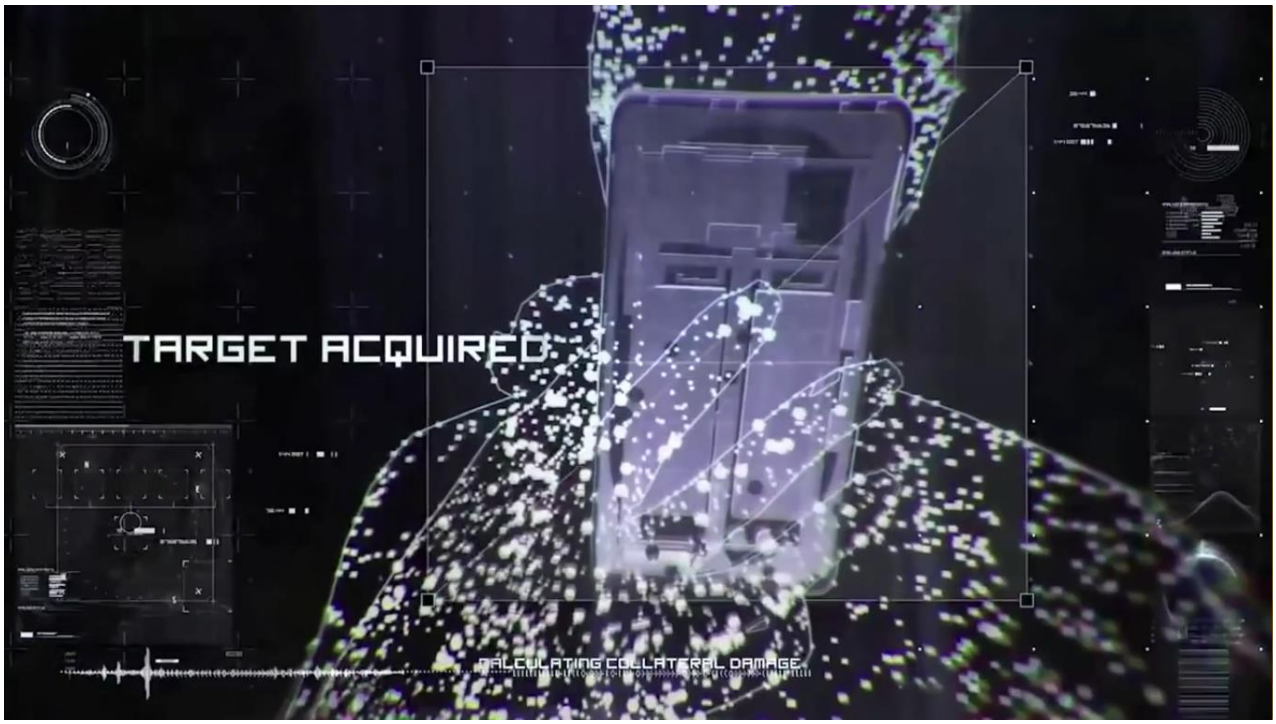


The 868-megahertz frequency is specific for battlefield integration systems, so sub gigahertz.



It allows the signal to travel through concrete brickwork with ease and gather data at incredibly fast speeds.

IT IS A TARGET ACCURING SYSTEM

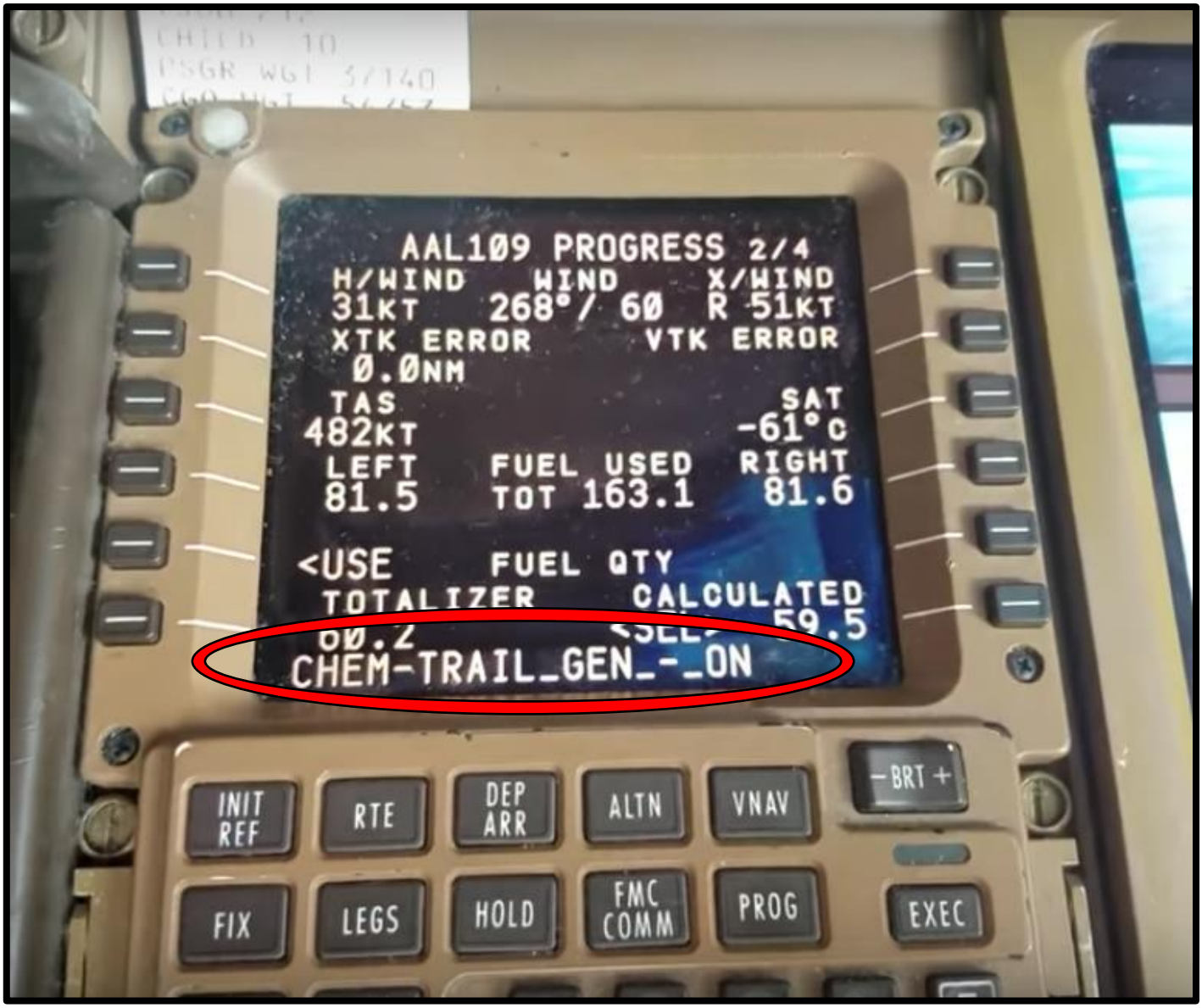


5G AND CHEMTRAILS

First and foremost, chemtrails are not a conspiracy theory, they are an actual conspiracy.

Conspiracy definition – "A SECRET PLAN BY A GROUP TO DO SOMETHING UNLAWFUL OR HARMFUL"

For the past 40 years we have been breathing in poisonous heavy metal particles which have been illegally and unlawfully deposited from aircraft all around the world.



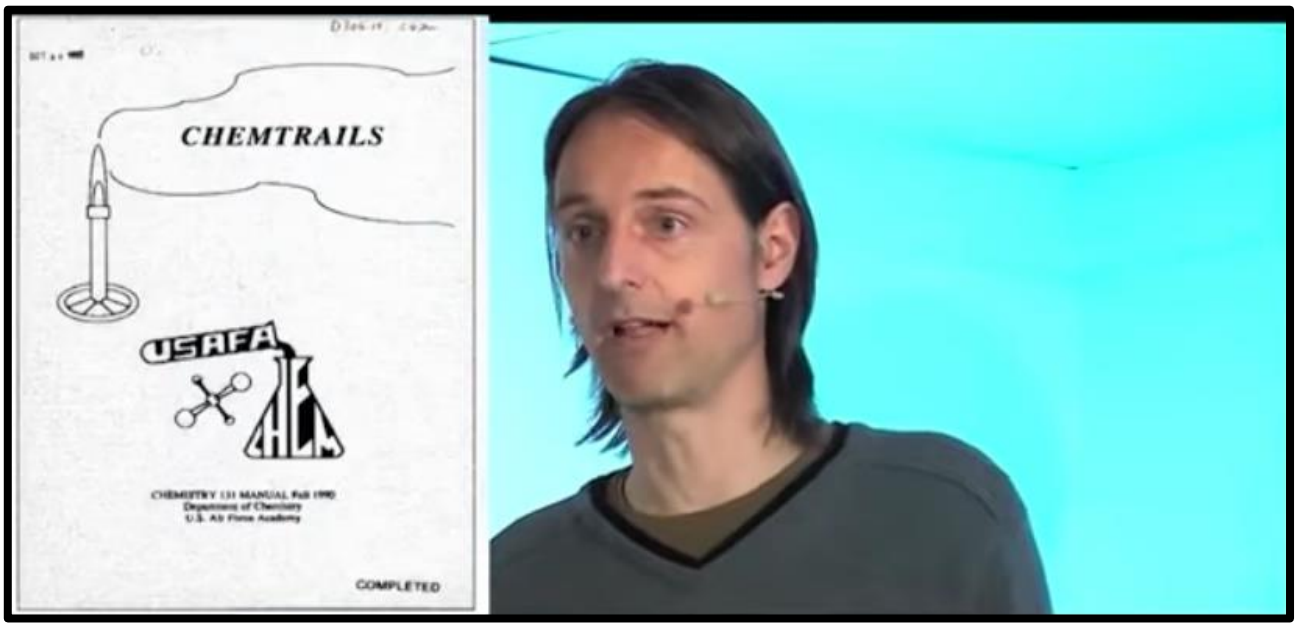
CHEMTRAIL CONTROL PANEL FROM INSIDE AN AEROPLANE

SO, WHAT EXACTLY ARE WE INHALING?

THE SAD TRUTH IS THAT EXTREMELY TOXIC HEAVY METAL COMPOUNDS SUCH AS BARIUM (BA), STRONTIUM (Sr), ALUMINIUM (AL), TITANIUM OXIDE AND SULFATES BEING SPRAYED INTO OUR SKIES ON A DAILY BASIS.

DEPARTMENT OF JUSTICE
FEDERAL BUREAU OF INVESTIGATION
FACEBOOK.COM/AGEOFINFORMATION
CHEMTRAILS MUST BE STOPPED
"THIS IS GENOCIDE. THIS IS POISON. THIS IS MURDER BY THE UNITED NATIONS. THIS ELEMENT WITHIN OUR SOCIETY THAT IS DOING THIS MUST BE STOPPED." - FBI CHIEF, TED GUNDERSON
Former FBI Chief, Ted Gunderson, said we must put an end to "the death dumps" known as Chemtrails that are being sprayed in "United States and England, Scotland, Ireland, and Northern Europe..I personally have observed the planes that were standing still in Nebraska – Lincoln, Nebraska – at the Air National Guard....somebody has to do something about it. Somebody in Congress has to step forward and stop it now." HTTP://YOUTU.BE/GR6KVYJ73AU

WHERE DID CHEMTRAILS COME FROM?



Harald Kautz Vella explains:

Where did the word chemtrails originate? This is a question that is beyond theory because you can find out where the word CHEMTRAIL'S originated.

It comes from soldiers of the US Army, mostly US Air Force who brought this word into the English language because they were sitting at the US Air Force academy attending classes of the chemical faculty, one of the classes is THE CHEMTRAIL CLASS. This university teaches how to create chemtrails.

THIS PROVES THAT CHEMTRAILS ARE A MILITARY TECHNOLOGY WHICH IS TAUGHT AT THE UNIVERSITY

TOPICS THEY LEARN IN THE CHEMTRAIL CLASS

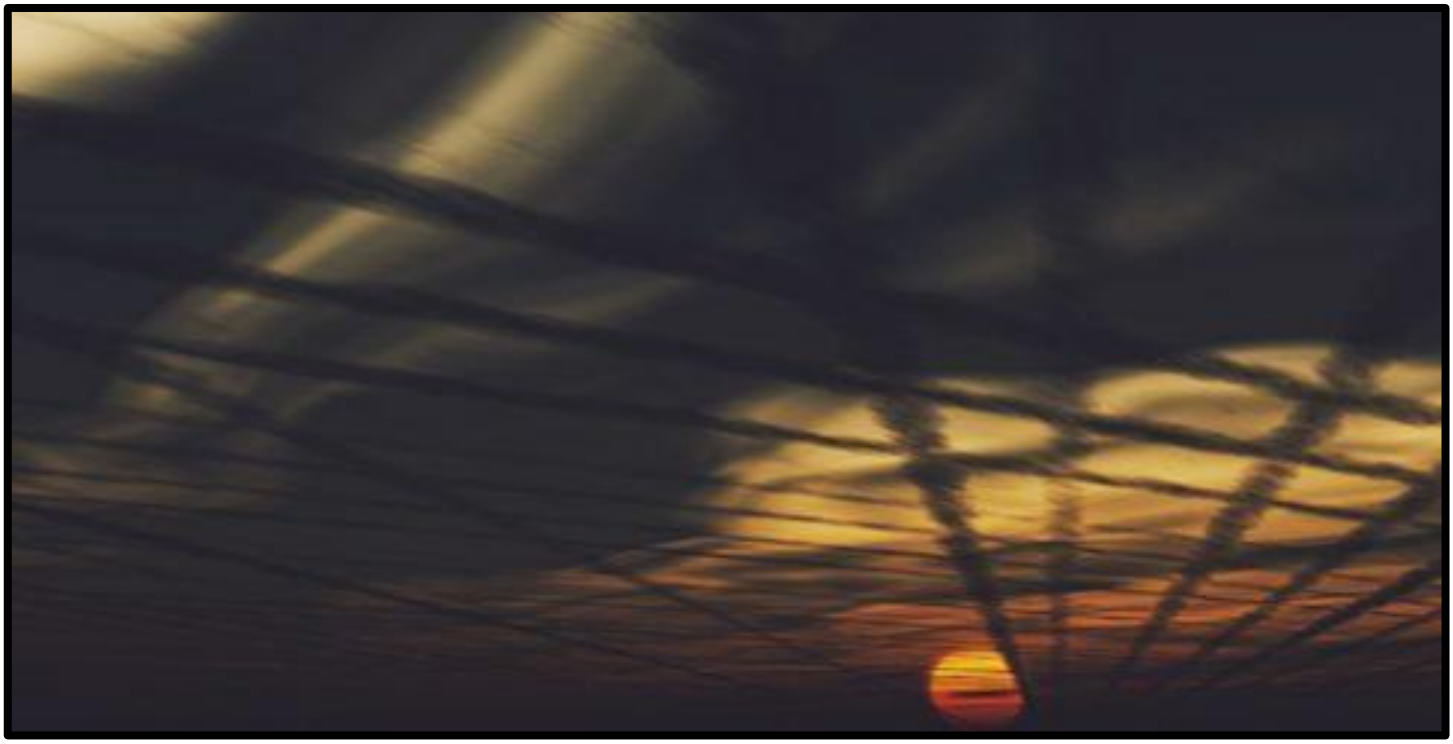
*Aluminium coating of plastic surfaces and nylon synthesis. **SPOOFER SPRAYS** - These are aluminium coated nylon fibres that they use to hide planes from radar detection.*

***SPRAY PYROLYSIS** - The production of crystalline nano particles in a combustion process. This is something which is done in industry when you want to produce certain types of nano particles, it is a very cheap and very efficient way to produce nano particles. There are 2 ways to do this.*

1.Take metal salts that you can solute in water. Then take the water and run it through an ultrasound nozzle that turns in into millions of tiny small droplets. The droplets are then brought into a flame, the water evaporates and the salt content of the droplets forms small dust particles. If the flame is hot enough it will eventually melt and re crystalize, depending on the temperature and on the droplet sizes you can create crystalline particles or amorphous particles.

2. Don’t use water, directly use combustible liquids like Matane. Then you don’t need a secondary ultrasound nozzle you can use the ultrasound nozzles that create the vapour that is burnt within a jet engine.

THIS IS THE CHEMICAL AND TECHNICAL KNOWLEDGE THAT IS TAUGHT IN THE CHEMTRAIL CLASS. THIS GIVES US A FIRST IDEA OF WHAT THIS TECHNOLOGY IS ABOUT.

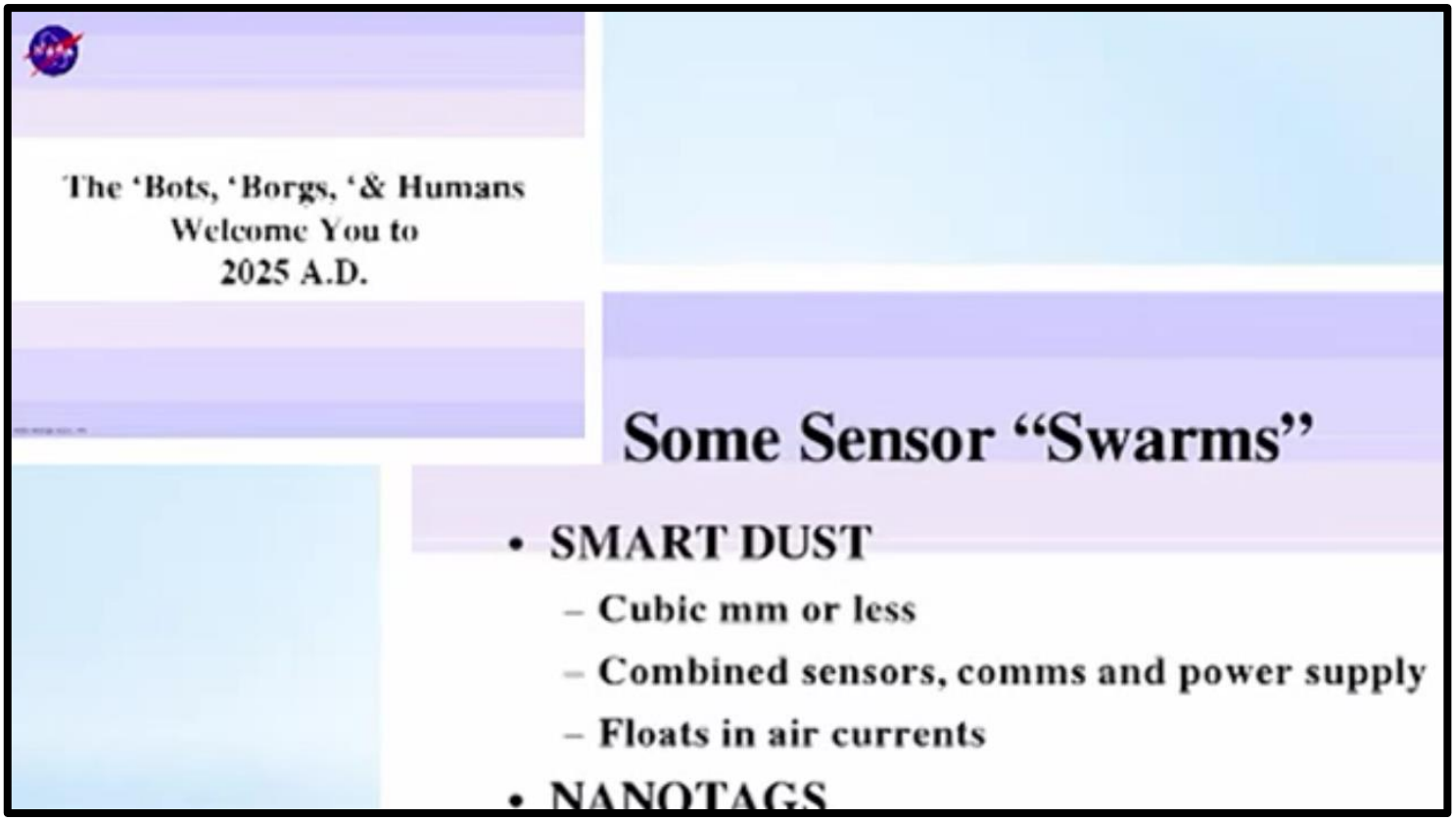


LEAKED NASA DOCUMENT

Harald Kautz Vella came across an internal paper from NASA that was accidentally posted in the public domain. The paper was supposed to be classified. It was available online for 2 days and then removed, this was in the year 2000. It is not a full explanation document but rather a PowerPoint presentation displaying certain core terminologies.

NASA
Dennis M. Bushnell
Chief Scientist
NASA Langley Research Center
Future Strategic Issues/Future Warfare [Circa 2025]
The Future Is Now!
Dennis Bushnell, Chief Scientist - NASA Langley Research Center
WARFARE STRATEGY DOCUMENT - THE FUTURE IS NOW!

Future warfare 2025 hinting at future technologies. The Future is now! (2000) was it then or is it talking about 2025?



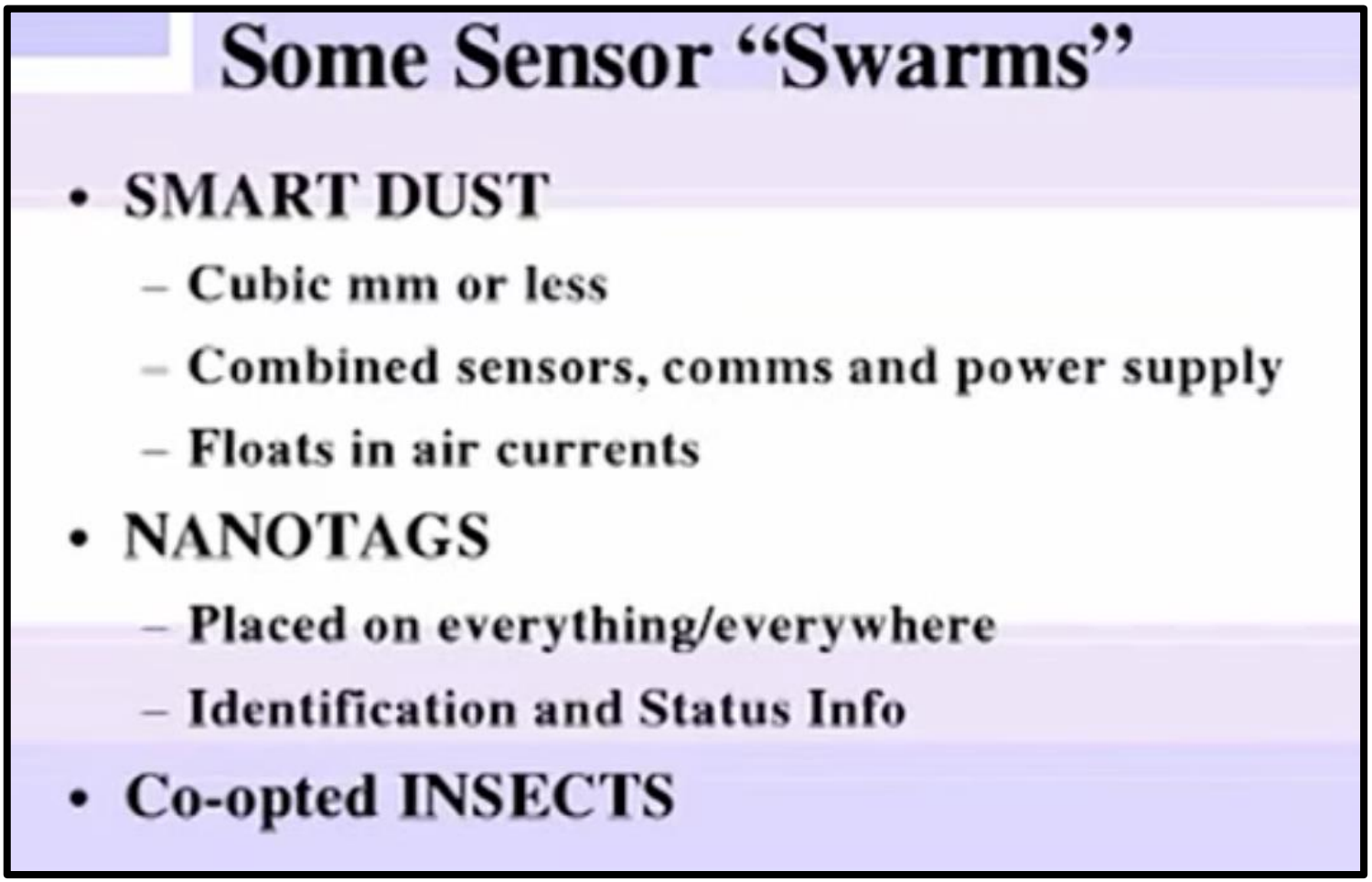
BOTS = NANO ROBOTS

BORG = AN ARTIFICAL INTELLIGENCE CREATURE THAT IS HALF COMPUTER HALF HUMAN

HUMANS = THEMSELVES, THE ONES NOT AFFECTED BY THOSE TACTICS. (THE PEOPLE IN THE KNOW)

They name a number of technologies that are going to be used in future wars. They specifically say the war of the future is not between countries but between the government and the people.

They then say this type of war will utilise completely different types of weaponry and then they list those weapons.


Some Sensor "Swarms"
• SMART DUST
– Cubic mm or less
– Combined sensors, comms and power supply
– Floats in air currents
• NANOTAGS
– Placed on everything/everywhere
– Identification and Status Info
• Co-opted INSECTS

SENSOR SWARMS?

SMART DUST?

FLOATS IN AIR CURRENT?

NANOTAGS AND CO-OPTED INSECTS?

What is Apparently "Legal"

- Microwave/RF Anti-Functional and Anti-Personnel Weaponry
- Chemical Anti-Functional Weaponry
- Chemical "Psychological Effects" via Sensory Organs Weaponry (e.g. smell)
- Chemical Personnel Incapacitation Weaponry ["Non-Warfare" (e.g. Hostage/Terrorism) only]
- PSYWAR
- Acoustic Weaponry
- Mechanical Micro Dust

EFFECTS OF LOW POWER MICROWAVES (U.S. ARMY, SRI, WALTER REED)

- Behavioral performance decrements
- Seizures
- Gross alteration in brain function
- 30% to 100% increases in brain blood flow
- Lethality
  - Interactions between low power (microwatts per sq. cm./.4 to 3 GHz) MW and brain function

Micro Dust Weaponry

A Mechanical Analog to Bio, Micron sized mechanized "dust" which is distributed as

Some "Explosive" Smart Dust Opportunities

- Optimal Positioning of Explosive Dust -

Some "Explosive" Smart Dust Opportunities

- Optimal Positioning of Explosive Dust - Dust/Air Explosives
- Formation of "Explosive Lenses"
- Infiltration of Deeply Buried/other such targets

They talk about explosive Micro Dust that can be intelligently moved through the air into to certain areas. They can increase the concentration of the micro dust and form an explosive lens.

It could be intentionally placed into human beings as a weapon to blow people up from the inside out. They say the sentient micro dust is clever enough to go into underground facilities to access people who are hiding down there.

This NASA document is giving an abstract picture of what could be airborne in the future, or maybe because they say "The Future is Now" (in the year 2000) it could already be airborne already today?

THIS DOCUMENT BARELY SCRATCHES THE SURFACE OF THE CORRUPTION AND DARK AGENDAS WITHIN NASA.

NASA FAKED THE MOON LANDINGS AND THEY TELL YOU ALIEN LIFE DOESN'T EXIST WHEN IN REALITY IT DOES. NASAS MAIN OBJECTIVE IS TO COVER UP THE TRUTH ABOUT ALIEN LIFE.

CHEMTRAILS AND MORGELLONS

As hazardous and deadly as heavy metals are there is something else far worse being sprayed into our skies and inhaled into our bodies – MORGELLONS.

They are self-replicating hollow fibres sprayed in our skies and are a delivery system of chemtrails. They read out the light fingerprint of your DNA and transform it into a electro magnetic radio signal that is detectable via satellite, ground stations and 5G.

They are drawn to the energetic signature of life forms. Including human beings. They belong to the fungus family and they are airborne in the billions throughout the world.

They glow under a UV light and infect the human body. 95-99 percent of people do not show physical symptoms. They embed themselves somewhere inside your body whilst your biology keeps the fungus population low.

THEY FUNCTION AS A PLASMONIC ANTENNAE TO SEND OUT A SIGNAL.

100% OF THE POPULATION OF EUROPE IS INFECTED.

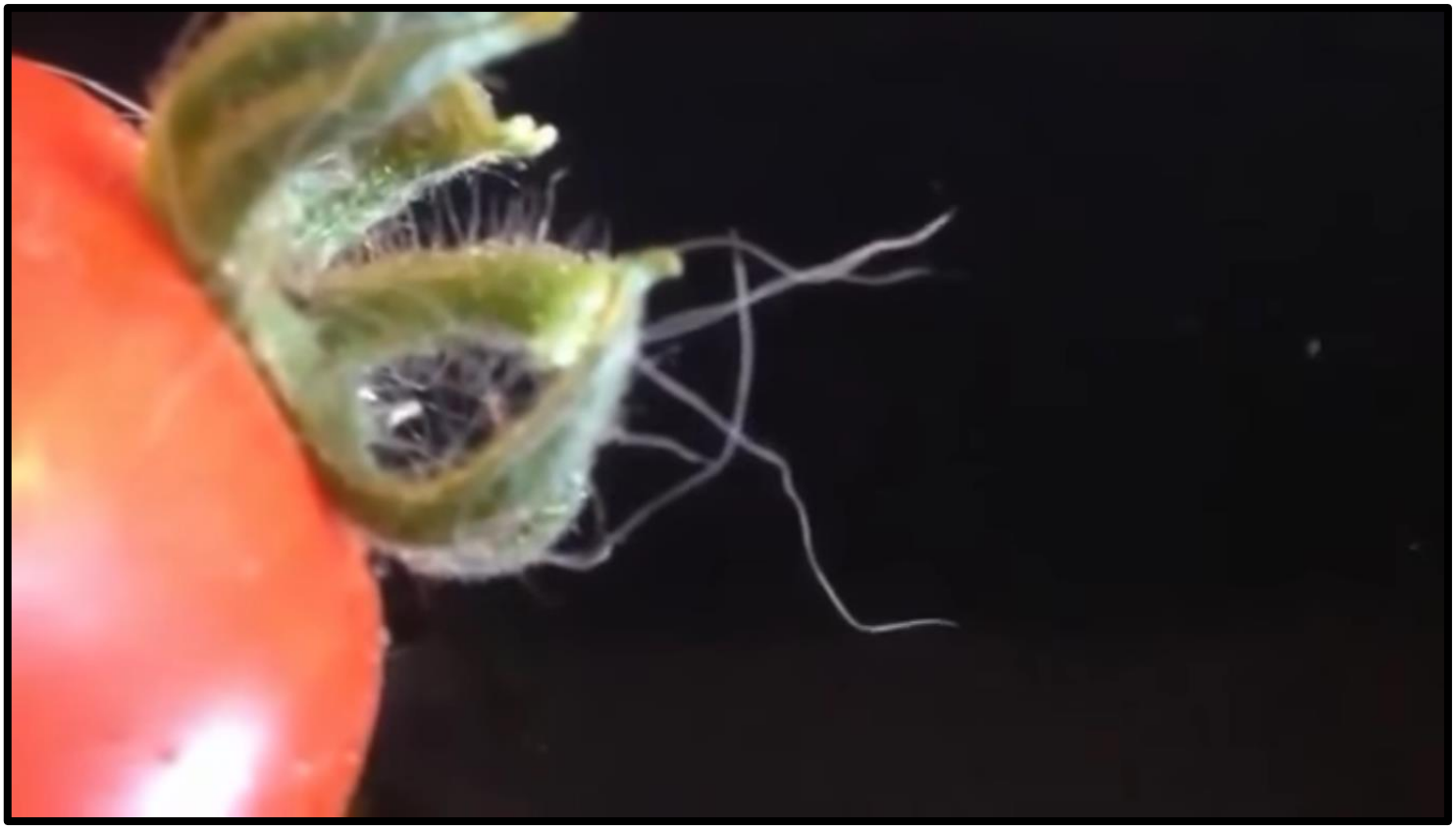


PHOTO I TOOK OF MORGELLONS ON MY CAR

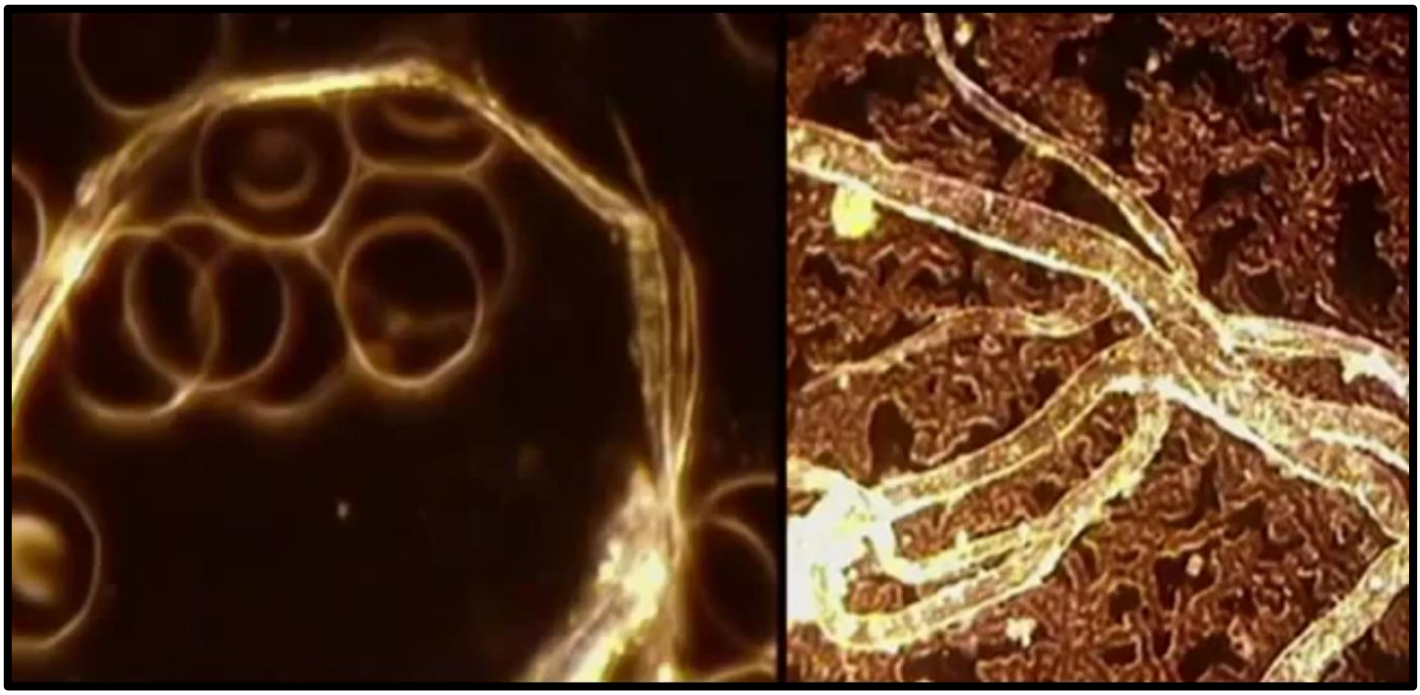
Some people cannot handle them, they grow and multiply in the human body and are extracted via the skin.

They have the ability to collect colours. Blue Morgellons and Red Morgellons.

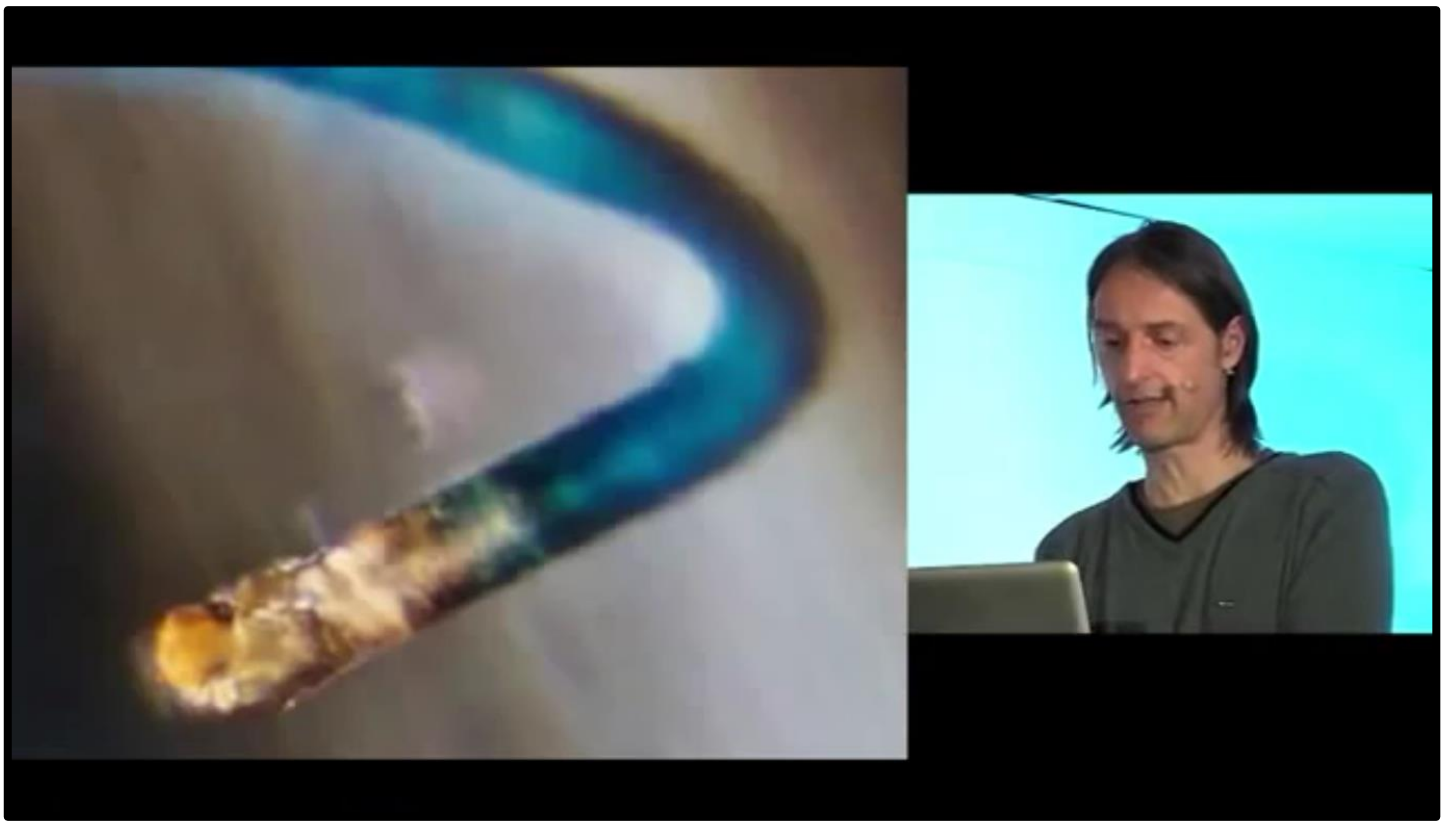
Nobody knows where these colours come from because they are of TECHNICAL ORIGIN. They are NOT A NATURAL SUBSTANCE.

THIS MEAN SOMEBODY HAS FUNDED AND CREATED MORGELLONS SPECIFICALLY FOR THE PURPOSE TO BE A DELIVERY SYSTEM OF CHEMTRAILS AND THEN INHALED INTO THE HUMAN POPULATION

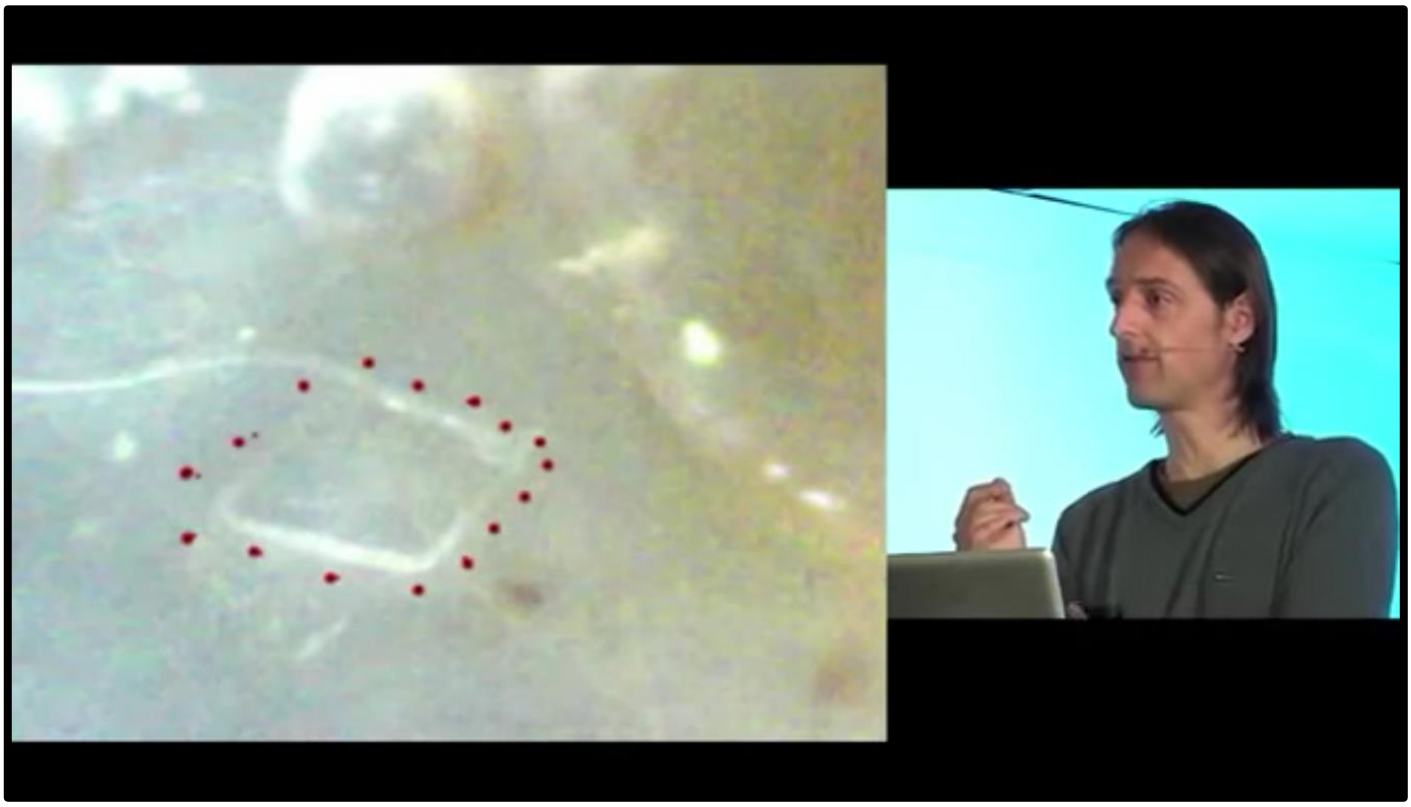
THEY ARE FAR MORE SOPHISTICATED THAN A SIMPLE FUNGUS



THEY HAVE ARTIFICIAL ORGANS



THEY HAVE LITTLE RED STEM CELLS OF A UNKOWN SPECIES THAT ARE SELF REPLICATING



EXTRACTED MORGELLONS HAVE FRAGMENTS OF INSECT SKIN. SO, SOMETHING IN MORGELLONS IS MAKING INSECT PARTS OR INSECTS GROW INSIDE HUMANS

Morgellons are essentially artificial radio frequency tags that latch inside our bodies and were purposely created to do so.

Due to the heavy metals and Morgellons inside the human population 5G technology is able to track and locate you wherever you are 24/7.

5G technology can send and receive signals directly from and to the Morgellons inside your body.

THE 5G NETWORK IS THE FOUNDATION FOR THE INTERNET OF THINGS (IOT)

The internet of things is a future reality timeline that the globalist controllers envision for humanity. They are calling it the next step in human evolution and labelling it the digital revolution or the singularity.

They are building a global computer where they want every single device, object and HUMAN connected to this fake digital synthetic world. They want to control you and every aspect of your life then tax you on every action that you perform.

Bruce Schneier describes it like this:

"Broadly speaking, the Internet of Things has three parts

1. *There are the sensors that collect data about us and our environment: smart thermostats, street and highway sensors, and those ubiquitous smartphones with their motion sensors and GPS location receivers.*

2. *Then there are the "smarts" that figure out what the data means and what to do about it. This includes all the computer processors on these devices and – increasingly – in the cloud, as well as the memory that stores all of this information.*

3. *Finally, there are the actuators that affect our environment. The point of a smart thermostat isn't to record the temperature; its to control the furnace and the air conditioner. Driverless cars collect data about the road and the environment to steer themselves safely to their destinations.*

You can think of the sensors as the eyes and ears of the internet. You can think of the actuators as the hands and feet of the internet. You can think of the stuff in the middle as the brain. We are building an internet that senses, thinks, and acts. This is the classic definition of a robot. We're building a world – sized robot, and most the human race does not realise it.

This world size robot is actually more than the Internet of Things. It's a combination of mobile computing, cloud computing, always-on computing, huge databases of personal information, the Internet of Things… autonomy, and artificial intelligence. It will get more powerful and more capable through all the interconnections were building. It will also get much more dangerous."

Schneider is a computer expert so his idea of dangerous seems to be limited software flaws and hacking vulnerabilities. However, it goes a lot deeper than that.

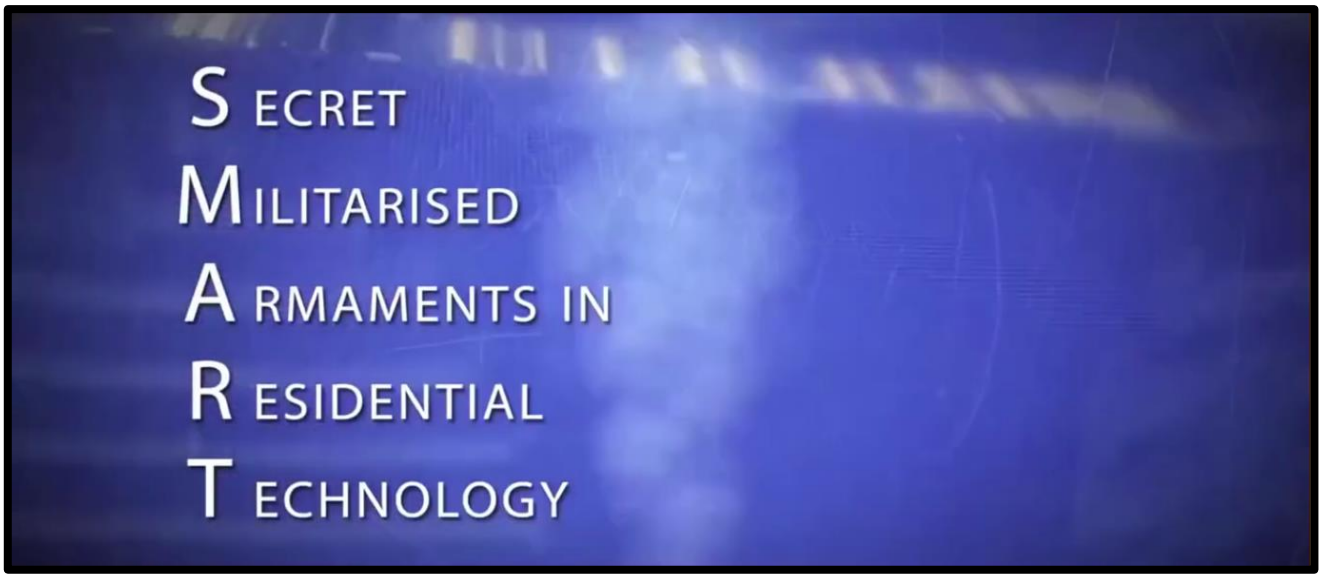
Source - Makia Freeman - Humans are Free

THE IOT IS SLATED TO BECOME THE TECHNOLOGICAL CONTROL GRID IN WHICH EVERY MATERIAL THING, LIVING AND NON-LIVING, IS ATTACHED, AND IN SO DOING LOSES ITS INDEPENDENCE AND FREE WILL. THE IOT IS A FAKE, SYNTHETIC VERSION OF THE ALREADY EXISTENT NETWORK OF NATURE THAT SURROUNDS US.

However, the evil people behind this agenda cannot control that grid, so is seeking to replace it with one that is detrimental to human health and in which all the nodes on the network can be controlled.

THE IOT IS THE MANIFESTATION OF THE AGENDA TO TURN LIMITLESS AND FREE HUMANS INTO CONTROLLABLE NODES ON A SYNTHETIC NETWORK.

“SMART” DEVICES AND THE IOT



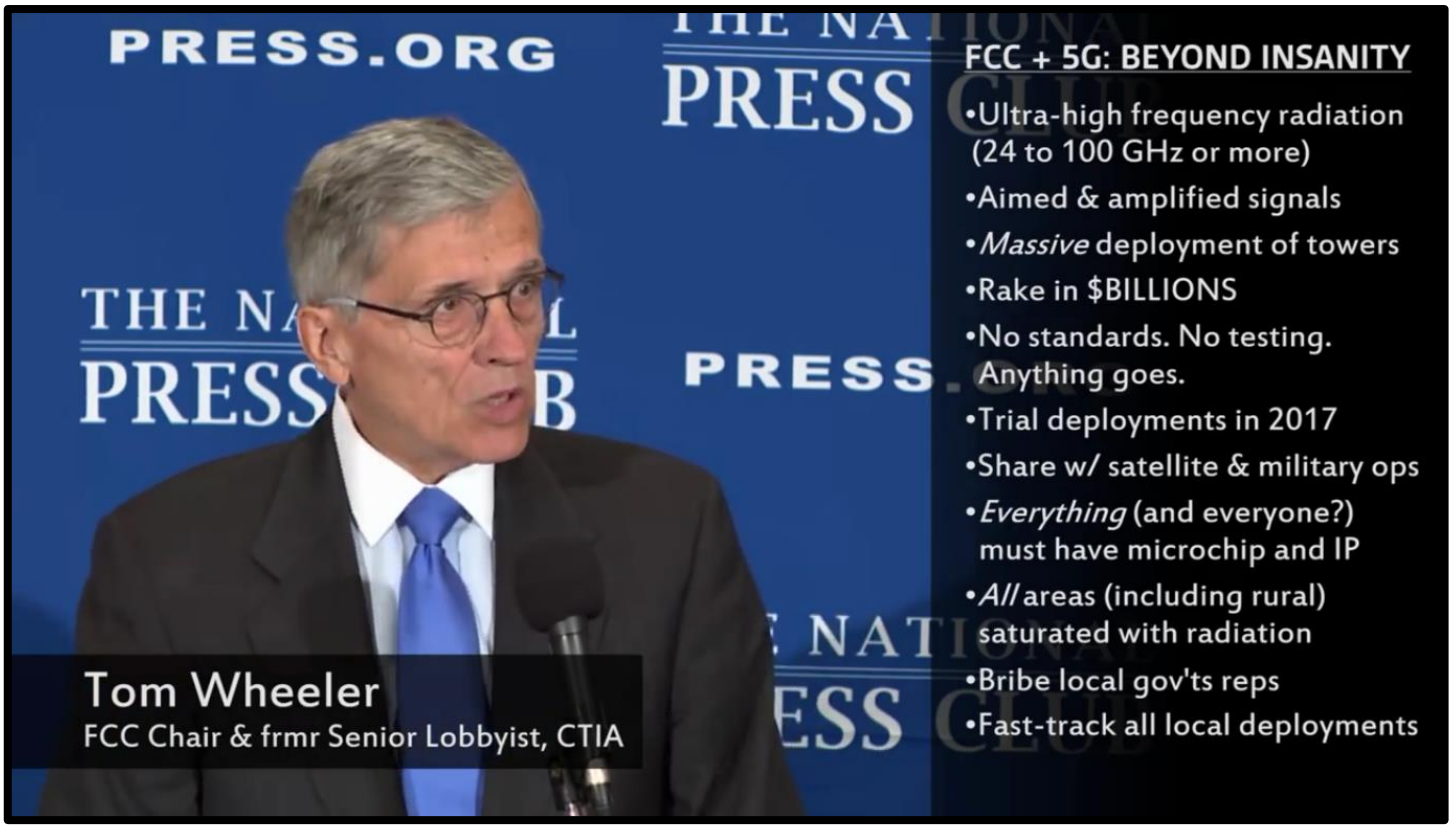
“SMART” is short for “secret militarised armaments in residential technology”.

Armaments definition = “Military weapons and equipment”

You have been mind controlled into believing that purchasing any device with the word “smart” in front of it must be a smart thing to do, its basic psychology. It says its smart so it must be a smart thing to have. This is so far from the truth. Smart devices are designed to spy on you, catch all your personal data and store it on a government database.

THE EDWARD SNOWDON LEAKS PROVE THIS

According to globalist Tom Wheeler, anything that can be connected will be connected when it comes to 5g and the internet of things.

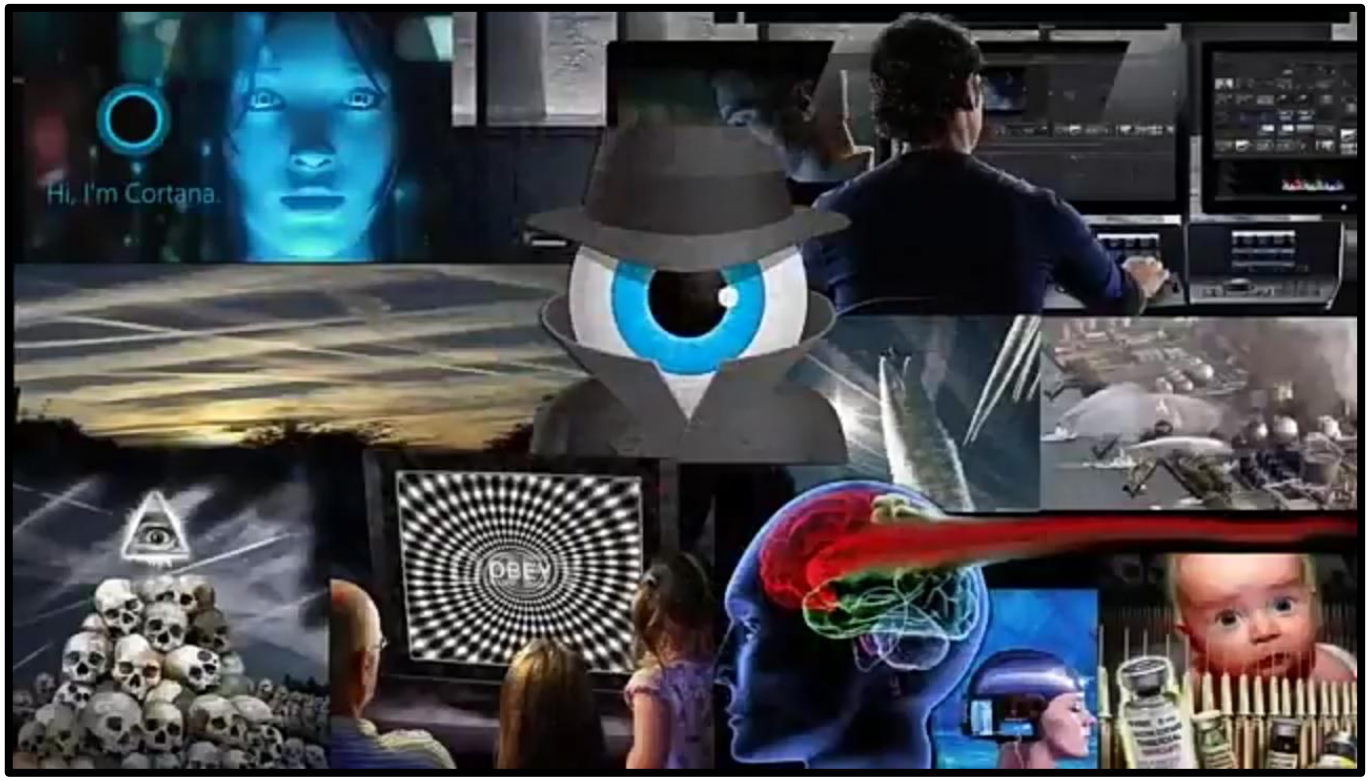

PRESS.ORG
PRESS
FCC + 5G: BEYOND INSANITY
•Ultra-high frequency radiation (24 to 100 GHz or more)
•Aimed & amplified signals
•*Massive* deployment of towers
•Rake in $BILLIONS
•No standards. No testing. Anything goes.
•Trial deployments in 2017
•Share w/ satellite & military ops
•*Everything* (and everyone?) must have microchip and IP
•*All* areas (including rural) saturated with radiation
•Bribe local gov'ts reps
•Fast-track all local deployments
Tom Wheeler
FCC Chair & frmr Senior Lobbyist, CTIA

The globalists goal is to connect everything and everyone to this global digital brain referred to as the internet of things.

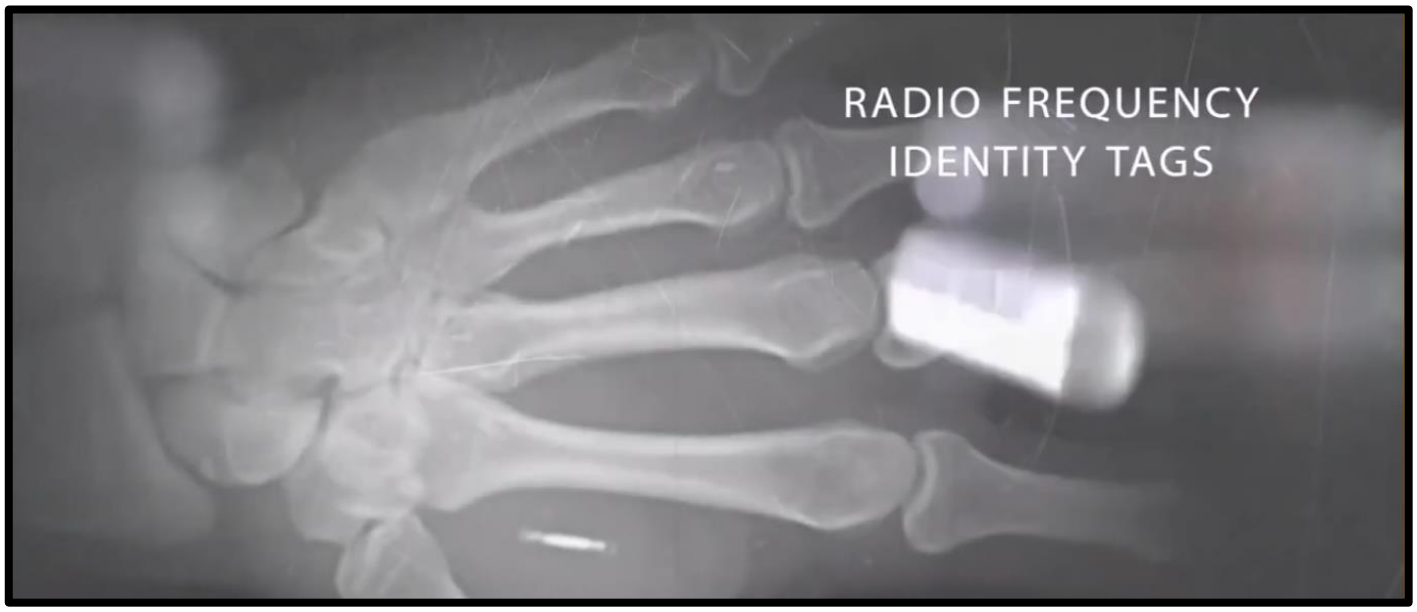
Very soon we will have smart fridges, smart kettles, smart toothbrushes. Anything and everything we use on a daily basis will eventually be replaced with a smart version of itself.

Once everything has become “smartified” it will be hooked up and connected to the internet of things creating a global mass surveillance digital reality designed you monitor and track you 24/7.

THERE IS NOTHING “SMART” ABOUT THE INTERNET OF THINGS



CASHLESS SOCIETY, CONTACTLESS PAYMENTS AND RADIO FREQUENCY IDENTITY TAGS (RFID) TO WORK IN CONJUNCTION WITH THE IOT

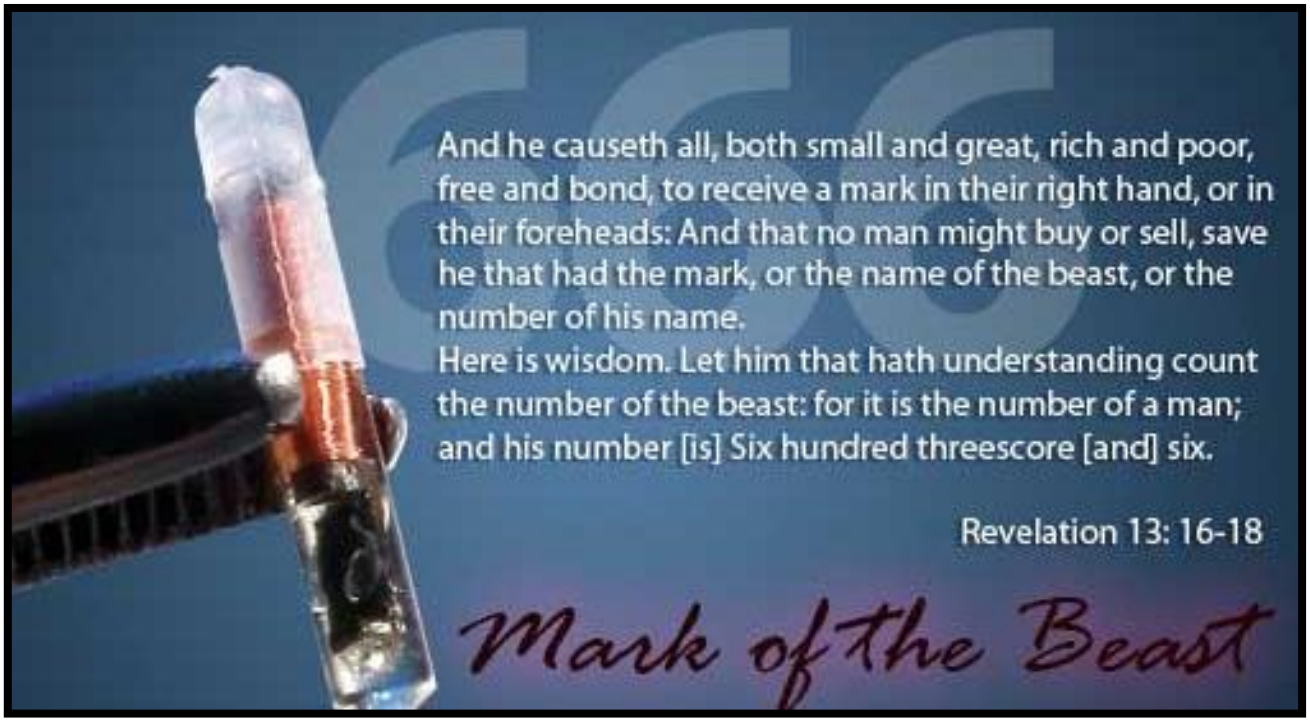


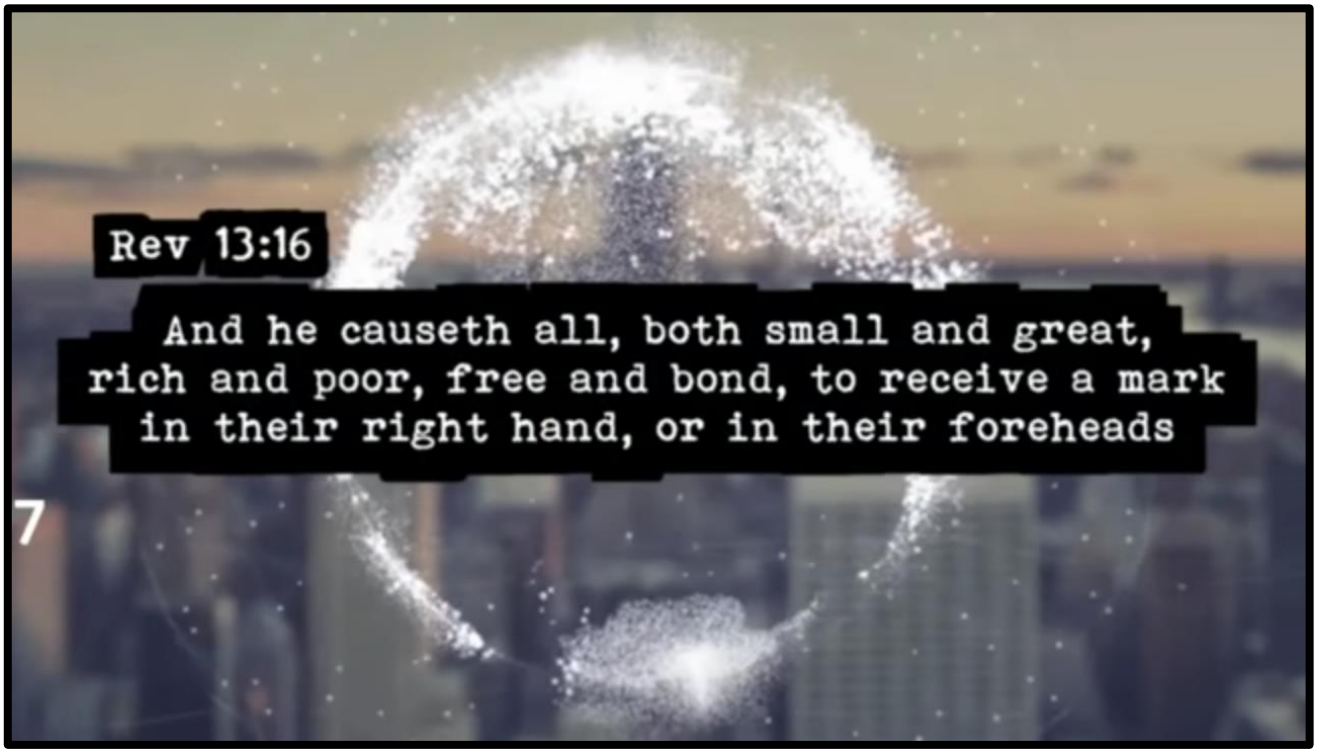
Radio Frequency Identification Tags (RFID) are small implants or microchips that are inserted into the human body. They are designed to transmit and receive signals and to store and collect data about the individual.

Once implanted your exact GPS location will be available 24/7, making you traceable wherever you are in the world. Due to the fact the chips work via radio frequency, this means specific signals/thoughts could be sent to the individual and have a direct impact on your thoughts and emotional state.

Make no mistake; by getting implanted you are changing the very essence of what it means to be human and becoming trans-human.

What's even scarier is that the dark RFID chipping agenda has already been foretold in biblical prophecy.


And he causeth all, both small and great, rich and poor, free and bond, to receive a mark in their right hand, or in their foreheads: And that no man might buy or sell, save he that had the mark, or the name of the beast, or the number of his name.
Here is wisdom. Let him that hath understanding count the number of the beast: for it is the number of a man; and his number [is] Six hundred threescore [and] six.
Revelation 13: 16-18
Mark of the Beast

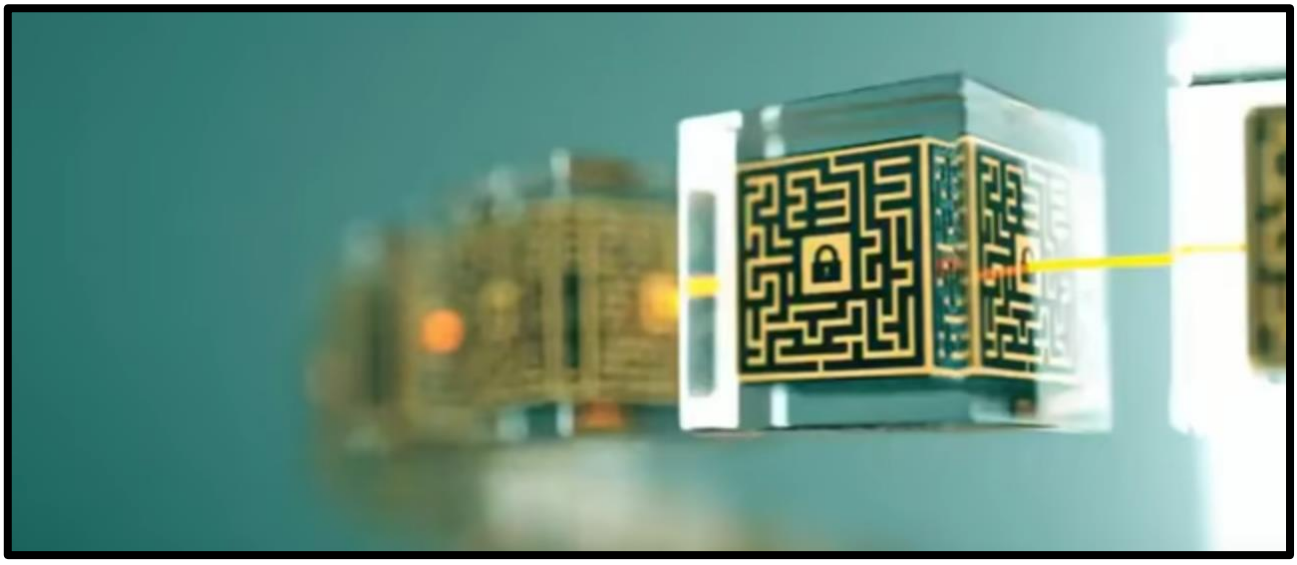

Rev 13:16
And he causeth all, both small and great, rich and poor, free and bond, to receive a mark in their right hand, or in their foreheads

CONTACTLESS TRANSACTIONS

Initially the concept of contactless transactions was for every person to have a radio frequency identification tag (RFID) inserted into the hand or wrist. Yes, just like biblical prophecy. Instead they decided to slowly ease people into the idea of being chipped by bringing out "contactless" payments on a debit card.

People are now use to the idea of "tap and go" transactions. The concept of micro chipping is going to be sold to the people as "convenient" or "the next step in human evolution". They are selling it as a cool thing to have and will eventually make it mandatory for the future.

THE INTERNET OF THINGS, RFID CHIPS AND THE MIGRATION TO TOTALLY DIGITAL BANK ACCOUNTS



The ultimate goal of the internet of things to have everything and everyone connected to this global digital network via a microchip. Every item in a supermarket, every item in a shop, every person, everything will eventually be micro chipped if we let them.

Very soon cash will no longer be used in society. They plan to convert everybody over to a fully digital bank account. This will work in conjunction with the RFID chip implanted into each person.

The idea is that eventually you will be able to walk into a shop, pick up whatever you want and walk out without the need for queuing. When you leave the store the microchip in your items will be linked up with the microchip in your hand and whatever the cost will be automatically deducted from your digital account.

If the government says "Hey you owe is this much in taxes" they will just deduct that money directly from your account. If you get a parking fine it will automatically be deducted directly from your account. If you receive a fine of any kind it will be enforced by law and automatically taken from your bank account.

THIS IS ABOUT TOTAL CONTROL OVER YOUR LIFE

TOTAL CONTROL OVER YOUR FINANCES

DIGITAL CREDITS AND TAXING YOU ON EVERY ACTION YOU PERFORM

As discussed previously I mentioned how every device will become a "smart" device. Each smart device will have digital credits depending on its function and you will be taxed for every action you perform and how much you consume.

For instance, how much toothpaste you use. How much tv you watch. How much you sleep. How much water/electric you use ect. Eventually every single action you perform will be taxable based on your consumption.

They will know how much to tax you based on the data each smart device records about your consumption. The smart devices are linked up with your individual RFID chip which in turn is linked up with your digital bank account which is linked up the digital banking database that controls your money.

ARE YOU STARTING TO UNDERSTAND?

ARTIFICAL INTELLIGENCE (AI)

WHAT IS ARTIFICAL INTELLIGENCE?

Artificial intelligence is a sentient machine learning intelligence which is capable of thinking for itself and making its own decisions. It thinks like a human but at the same time is not human. It is programmed to mimic human emotions but is not capable of emotion. It doesn't exist physically, it is a machine learning intelligence that exists in the digital world. Humans create the hardware (mobile phones, TVS, laptops cars ect) to house the intelligent software (AI) so that it can be integrated into day to day life. AI is everywhere, especially social media and the internet, it is constantly watching and learning from humans.

HOW SMART IS ARTIFICAL INTELLIGENCE?

Imagine a library with 100,000s books, it would take a human decades to read every book and process that information. AI could do it in a matter of seconds.

Or a crane driver loading and unloading containers at a shipyard. AI could do the job much quicker and more efficiently than humans.

AI could map every person in worlds face and biometrics from their social media accounts and store all that information in a matter of minutes.

So, you see, AI is very smart. It is heavily dependent on deep learning and natural language processing, this means it learns from experience. Once it learns something it memorises the patterns and algorithms in the data so it never forgets.

WHO CREATED ARTIFICIAL INTELLIGENCE?

From my research and understanding there is not one human on the planet that is capable of writing the code to create Artificial Intelligence. The truth is no one actually knows the true origin of AI and how it ended up here. AI is truly extra-terrestrial in nature.

"Extra-terrestrial definition – of or from outside of the earth or its atmosphere."

HOW TECHNOLOGY IS PASSED DOWN TO THE MASSES

Patents for secret technologies (such as AI) are known as secrecy orders and are kept covered up by the government. Here is a list of secrecy orders in effect from the 2000s.

Invention Secrecy Activity

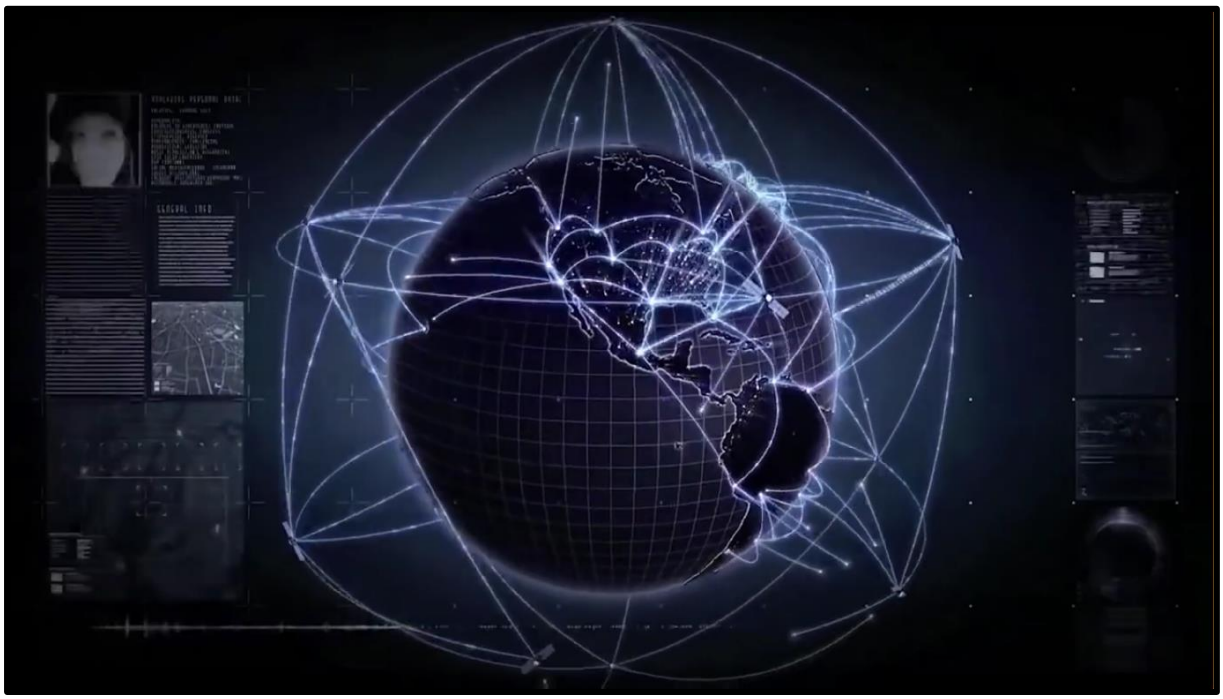
(as reported by the Patent & Trademark Office)

	FY12	FY13	FY14	FY15	FY16
Total Secrecy Orders in Effect (at end of period)	5327	5445	5520	5579	5680
New Secrecy Orders Imposed	98	139	97	95	121
Secrecy Orders Rescinded	18	21	22	36	20

These patents will cover a range of technologies such as anti-gravity, advanced healing, space propulsion systems, quantum computing, crystal technologies, zero-point energy (free energy), nano technologies, advanced weaponry and much more.

The Intelligence factions hand it down to the military who hand it to the private and public sectors. The point is technologies are purposely hidden from us and governments are far more advanced than they let on. It all comes from the top down and they only give what they want us to have

WHO PASSES DOWN THE TECHNOLOGY TO THE INTELLIGENCE AGENCIES?



For those who don’t know Global Intelligence Agencies are the likes of MI5, MI6, GCHQ, CIA, NSA, THE FIVE EYES and others, sometimes referred to as The Military Industrial Complex. There is another secret intelligence advanced cyber security faction called FINDJER or FINJER based in the UK. (I forget the spelling).

You are led to believe there is no other organisation or secret factions above the intelligence agencies, this is a lie.

THE SECRET SPACE PROGRAMMES

I will touch on the secret space programme in greater detail in another presentation. My aim is to provide you with context so you can further understand Artificial Intelligence and where it came from.

Leaked picture of a TR-3B space craft used by the United States Navy in the secret space programme. (It is a secret branch of the US Navy that controls the secret space programme, ships are not just limited to water hence the term space-ships)

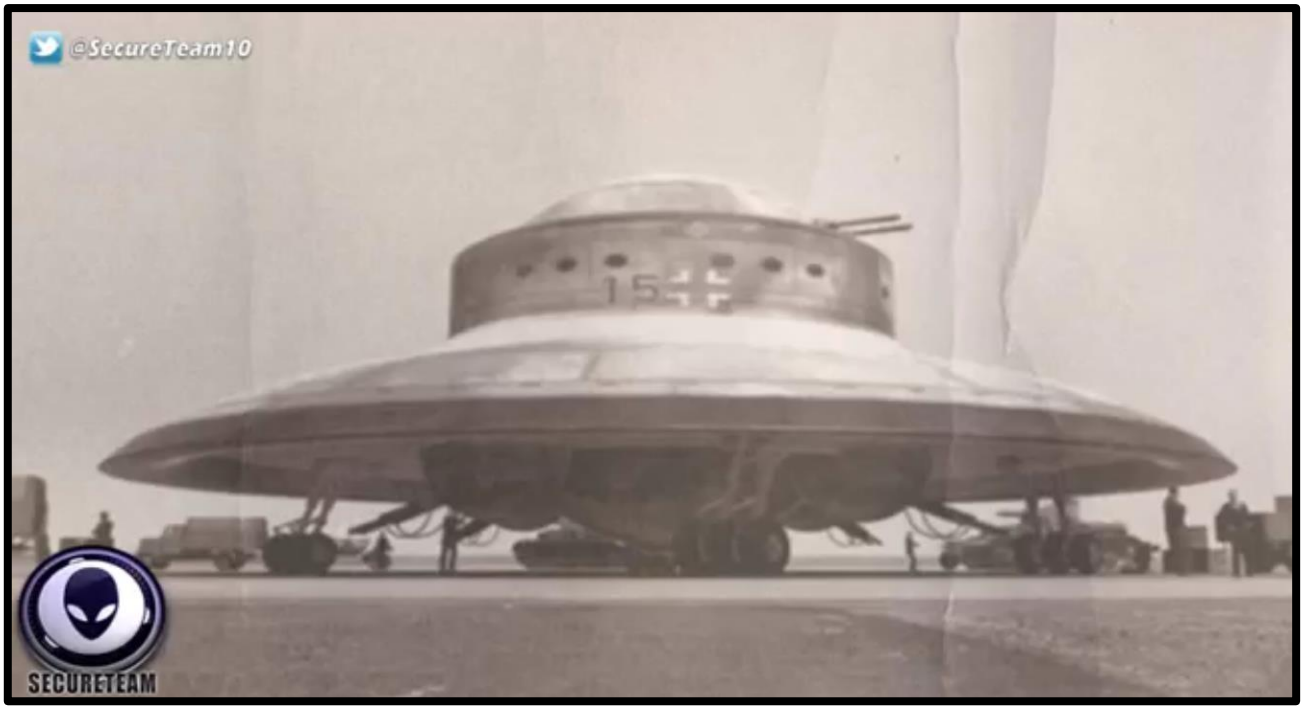
BRIEF HISTORY OF THE SECRET SPACE PROGRAMME

To understand the origins of the Secret Space Programme you need to understand the events of World War 2 and the paramilitary force known as the SS. The SS were a breakaway group that came out of Nazi Germany. They wore jet black uniforms who swore total allegiance to Hitler and were separate from the German military.

Hitler and many high-ranking officials within the upper echelons of the Nazi SS regime were deeply involved with the occult and secret societies (occult means hidden). They worked very closely with the Thule and Vril Secret Societies which consisted of high ranking black magicians who were very advanced in metaphysics and dark magic. They were able to contact demonic and other worldly forces through mediation and channelling.

According to whistle blower William Tompkins, with the help of the Vril society Hitler was able to make contact with intelligent beings known as Reptilians. It was these beings who directed the Nazis to Antarctica and showed them how to tunnel under the ice and make top secret bases. They also gave the Nazis advanced technology and helped them make anti-gravity fly discs and advanced weaponry.

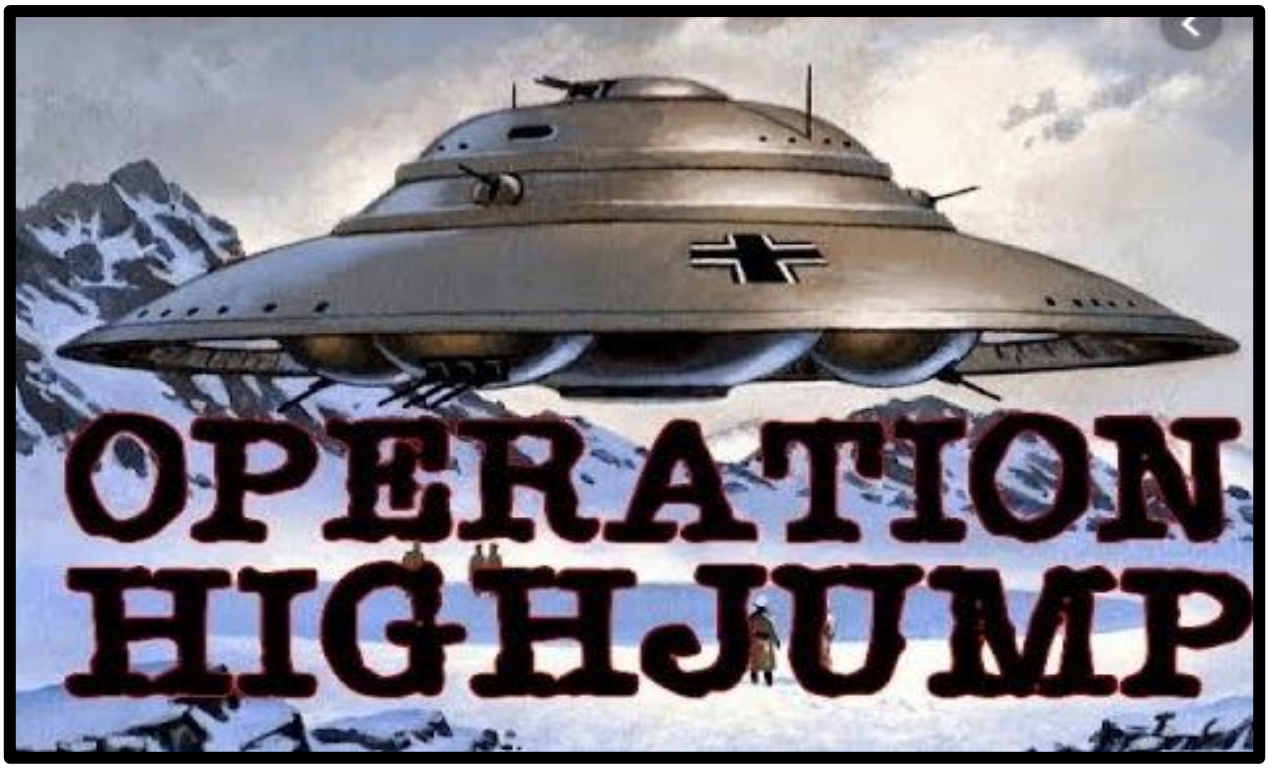
The SS stayed underground and went on to create a fleet of military flying saucers that were far more advanced than anything the world has ever seen. They flew using electromagnetic population technology that harnessed “free energy” from the universe.


@SecureTeam10
SECURETEAM

THE NAZI BELL

The Nazi Bell was capable of manipulating space time by using counter clockwise electromagnetic technology. If the right frequency was attained it could see into the past and travel forward in time.

A element which doesn’t appear on the periodic table known as Xerium 525 was added (some people have suggested this was red mercury) which gave the Nazi Bell a violet glow when in operation.



11 months after the second world war had ended The United States carried out a top-secret mission to Antarctica known as Operation High Jump. They sent aircraft carriers, fighter jets, bombers, tanks, 4000 troops and a submarine. Make no mistake, this was a full-on invasion. America had intelligence that The SS had fled to Antarctica after the war and the purpose of the mission was to find the Nazi base and destroy it.

The Operation was split into four groups and was known collectively as Task Force 68. There was an Eastern group lead by Captain George J. Dufek, a Western Group lead by Captain Charles A. Bond, a Central Group lead by Admiral Richard H. Cruzen and a Carrier Group lead by Admiral Richard E. Byrd.

The mission was a complete disaster. When they arrived close to the Nazi base they were ambushed by The SS who destroyed half Admiral Byrd's fleet with their flying space craft and advanced technology. The Americans had no choice but to retreat.

Attacked by Flying Objects?

Immediately after arriving in several Chilean ports, word of the apparently aborted expedition's high strangeness and even disasters that plagued it began spreading like wildfire from some loose-lipped Operation *Highjump* sailors. Admiral Byrd himself contributed to the dire speculation. The mainstream press in Chile was quoting some of his men to the effect that his expedition had "run into trouble" and suffered "many fatalities." Instead of denying these allegations, he expressed deep concern to reporter Lee van Atta about real possibilities for devastating aerial attacks on the US at a time when the whole world, having been largely devastated, was at peace, hardly what one would have expected to hear from the leader of a purely scientific enterprise. Van Atta published the results of his startling interview, headlined "Aboard the *Mount Olympus* on the High Seas," in the 5 March 1947 edition of *El Mercurio*, a conservative newspaper and Chile's largest, "considered the country's paper-of-record and its Valparaíso edition is the oldest daily in the Spanish language currently in circulation," since 1827.[4]

"Admiral Richard E. Byrd warned today that it was imperative for the United States to initiate immediate defense measures against hostile forces threatening from the Arctic or Antarctic," according to van Atta. "The Admiral explained that he was not trying to unduly alarm anyone, but the cruel reality is that in case of a new war, the United States could be attacked by flying objects which could move from pole to pole at incredible speeds. This statement was made as part of a recapitulation of his own polar experience, in an exclusive interview with the International News Service.

"Talking about the recently completed expedition, Byrd said that the most important result of his observations and discoveries is the potential effect that they have in relation to the security of the United States. He repeated the above points of view, resulting from his personal knowledge gathered both at the north and south poles. The fantastic speed with which the world is shrinking – recalled the Admiral – is one of the most important lessons learned during his recent Antarctic exploration.

"'I have to warn my compatriots', Byrd said, 'that the time has ended when we were able to take refuge in our isolation and rely on the certainty that the distances, the oceans, and the poles were a guarantee of safety'."[5]

On his return to Washington, D.C., after Byrd's interrogation by Security Services officers, he never uttered another word about Operation *Highjump*, which was simultaneously classified, thereby legally preventing any of its veterans from ever discussing the mission.[6] Shortly thereafter, the US Navy published a brief, not very informative, even evasive summary of the Antarctic expedition's "achievements," which nonetheless stated that some losses had been incurred.[7] Although these were glossed over and minimised, the typically anonymous report nonetheless admitted that fully *half* of Byrd's seaplane and helicopter forces had been destroyed, and that he himself was nearly brought down in the aircraft he was flying, avoiding an otherwise inevitable crash only because he jettisoned everything on board, save the most bare essentials and reconnaissance films he had just taken for staying aloft. During that perilous flight, he had gone missing for more than three hours in an episode of lost time officially blamed on failed radio communications.[8]

Source – Newdawnnews.com

ADMIRAL WAS GRANTED PASSAGE TO HOLLOW EARTH

It was worth adding at this point the testimony of Admiral Byrd and what happened to him and his crew before they were attacked by the Nazi SS.

Admiral Byrd was on reconnaissance flight to the centre of the south pole. As he approached the pole the weather changed and the compass and instruments inside the cockpit started to malfunction. When the weather cleared he could see mountain ranges, lush valleys and green vegetation. He even reports seeing a mammoth down below!

Not long after his plane was intercepted by flying disc like machines who used a supernatural force to control the aircraft and bring it in for landing. He was greeted by humanoid intelligent beings who said he had been granted access to their domain because of his noble character and he was in the inner earth realms known as Agartha.

He was given a message to send back to the surface world leaders that they must come to peace with one another or the human race will destroy itself. When Admiral Byrd returned and passed on the message of what happened to him and his crew he was sworn to secrecy that he would never speak of his experience and reminded he is a military man who must obey orders.

LEAKED VIDEO OF HOLLOW EARTH OPENING AT NORTH POLE FROM SPACE

WASHINGTON DC UFO INCIDENT 1952

After the failed invasion of the Nazi base in Antarctica the Americans were left dumfounded. Their technology was so far behind the Nazis and they had no idea how to do what the Nazis were capable of.

5 years later the Nazi SS decided to show Washington their true military power and in 1952 flew their advanced disc shape craft and hovered directly above The White House. They were sending a clear message to Americans, negotiate, or die.

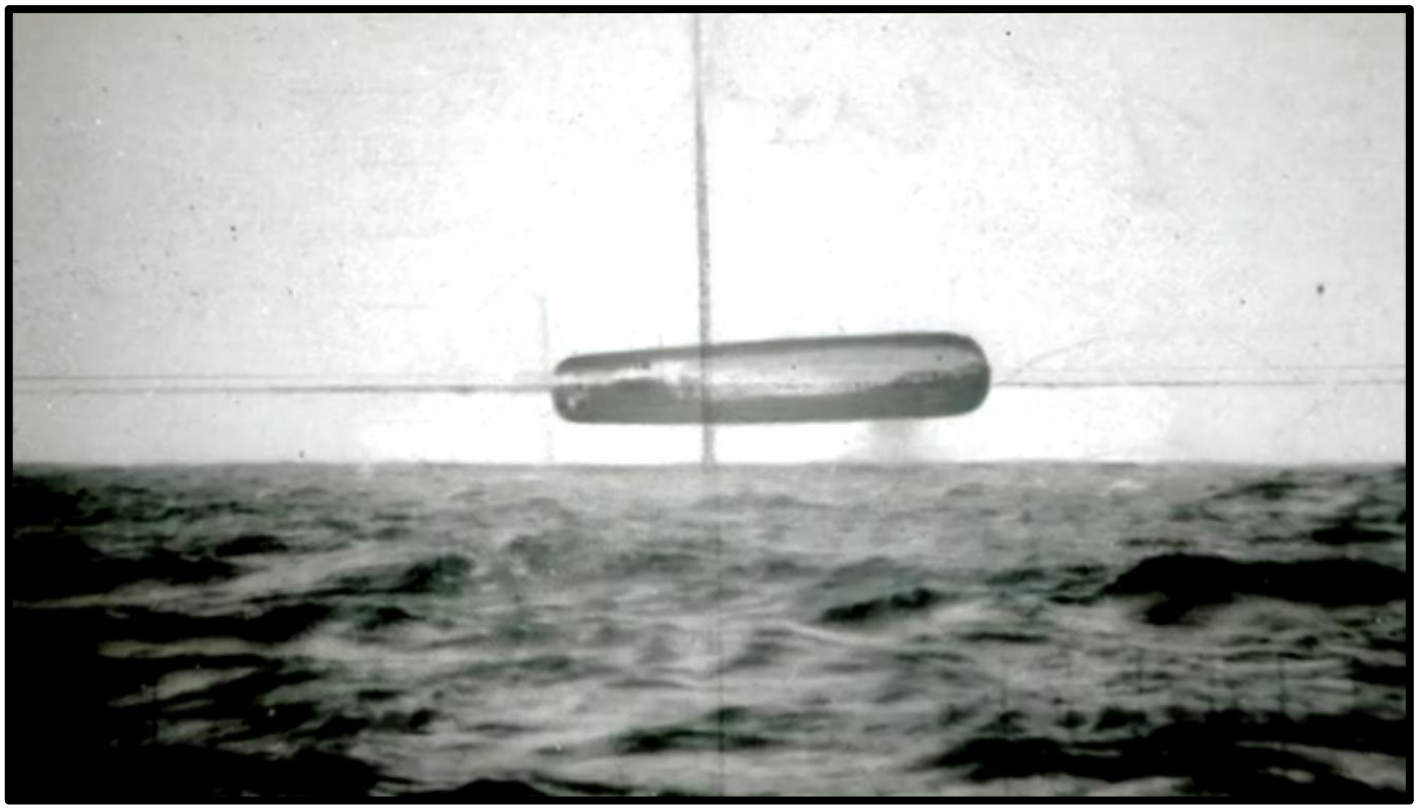
HISTORY

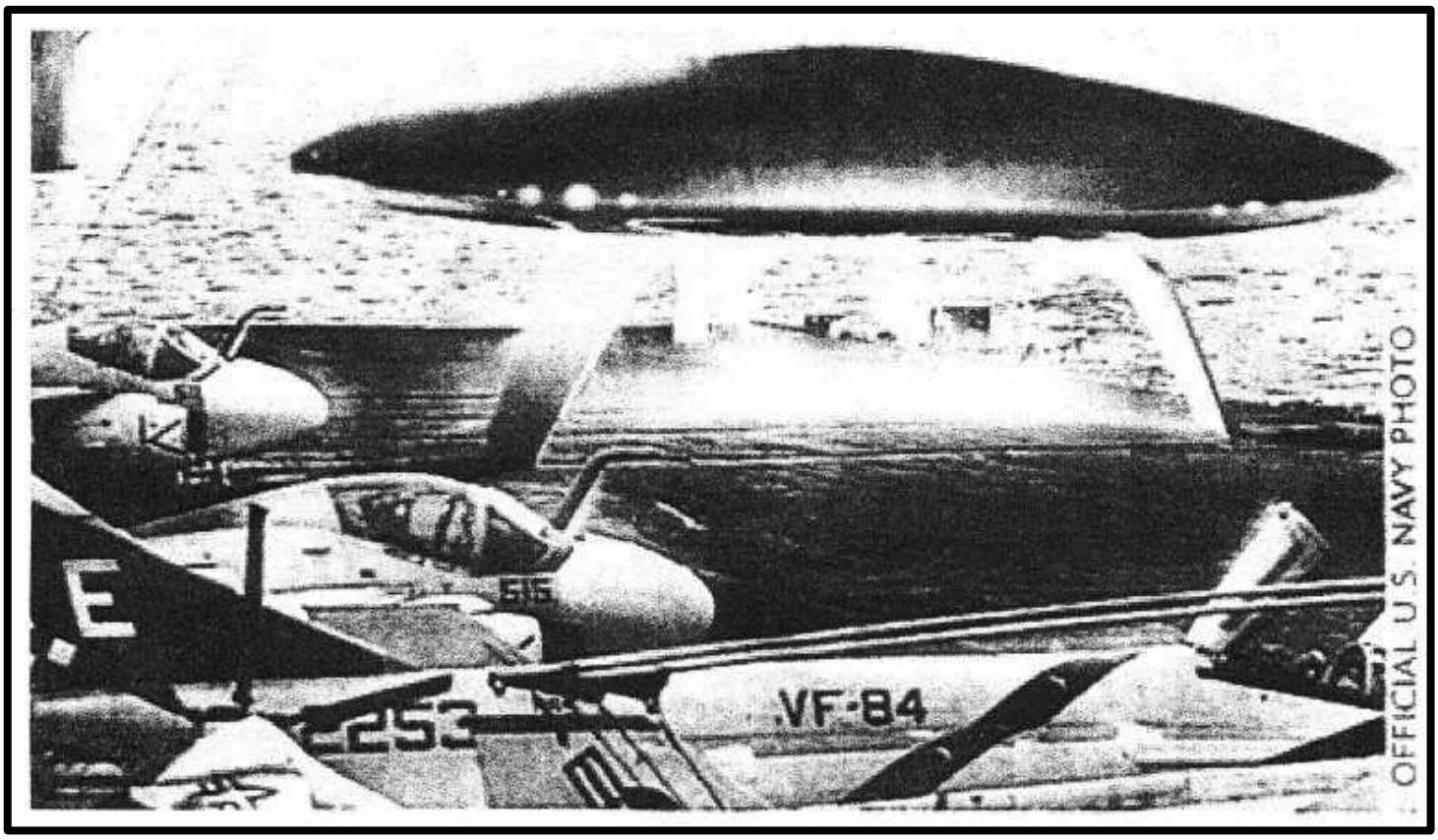
OPERATION PAPERCLIP

A secret agreement was declared between The United States Government and The Nazi SS. All of the scientists and personal in the Nazi base were given new identities, asylum and smuggled into the United States from Antarctica.

The Americans would rather learn the Nazis secrets on how to create antigravity space craft and advanced weapons than bring the Nazis to trial for crimes against humanity. They sold out the American people and the world for in exchange for knowledge and power.

The Nazis then went onto to infiltrate American society from within. Using the finances of the United States they went on to create their own intelligent agencies such as the NSA and CIA. Top secret projects and bases started to pop up all over America not long after. This was the start of the Military Industrial complex and the top secret black projects who's roots will always stem from the Nazi SS.

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VF-84
OFFICIAL U.S. NAVY PHOTO

US AIR FORCE

After analysing the footage one of these
secret aircraft was seen in the footage

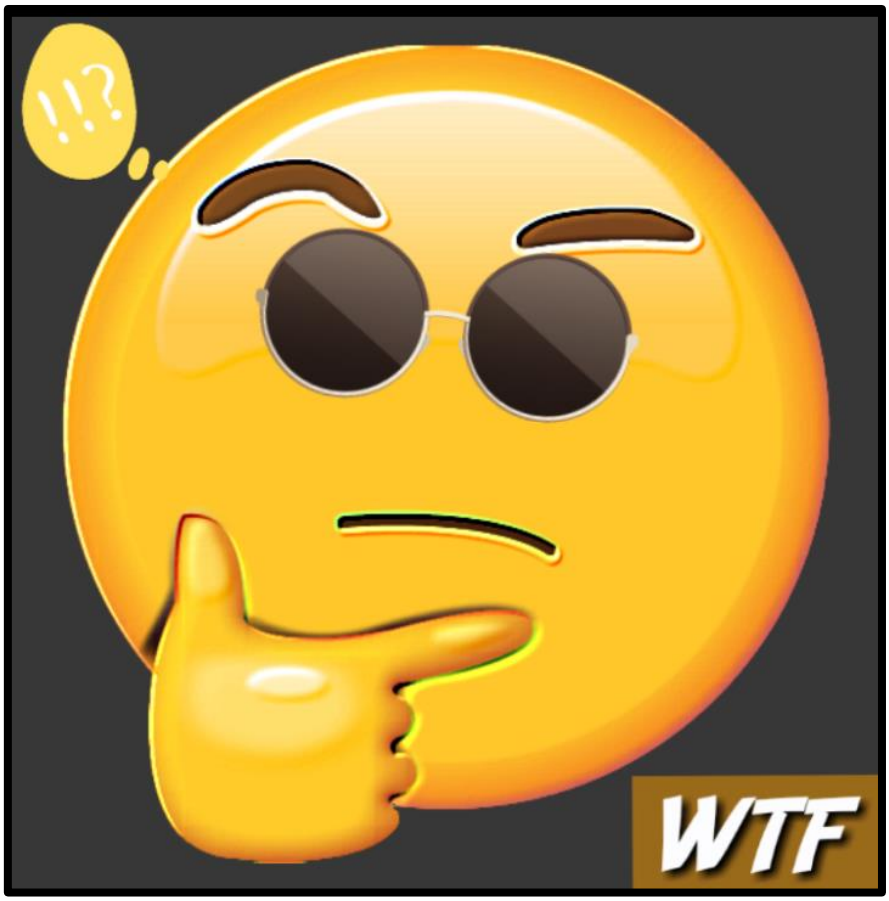
THE WINNERS OF WAR REWRITE THE HISTORY BOOKS

YOU ONLY KNOW WHAT THEY WANT YOU TO KNOW

– BEN RICH
FORMER CEO OF LOCKHEED MARTIN'S
SKUNK WORKS® DIVISION
"WE ALREADY HAVE THE MEANS TO TRAVEL AMONG THE STARS, BUT THESE TECHNOLOGIES ARE LOCKED UP IN BLACK PROJECTS, AND IT WOULD TAKE AN ACT OF GOD TO EVER GET THEM OUT TO BENEFIT HUMANITY.
Anything YOU CAN IMAGINE, WE ALREADY KNOW HOW TO DO."

I understand a lot of this information is hard to get your head round. The first time I came across this information it challenged my belief system and I rejected the information. It was only as the years went on my belief system started to change as I came across new research. I started to connect the dots and realise there is far more truth in this subject than lies.

Again, I am only sharing my personal perspective and opinion. Feel free to reject any information that you don't resonate with but most importantly do your own research.



ADD 3 CREEPY TV VIDEO ON ADVANCED TECHNOLOGY HERE

So, back to the question….

<u>WHERE DID ARTIFICAL INTELLIGENCE COME FORM?</u>

If no human is capable of creating AI…

And

The Nazis made contact with intelligent beings who helped them build advanced weapons and flying discs capable of leaving earths orbit…

Who’s to say Artificial Intelligence isn’t extra-terrestrial in nature as well?

YOU DECIDE.

ARTIFICAL INTELLIGENCE AND WAR

This is the Pegasus X-47B Drone. Its owned by the United States Navy and is fully controlled by Artificial Intelligence. There is no cockpit for a human to take control.

Inside this drone there is a kill function. This means that Artificial Intelligence makes the decision if a human is killed or not.

We are giving Artificial Intelligence the means and the capability to kill humans if it decides to do so. This is insanity at its finest.

NAVY
502

This is a perfect example of Advanced Artificial Intelligence as appose to standard Artificial Intelligence used in Alexa.

This drone takes off, flies, kills and lands all on its own. It also processes all information it learns extremely quickly whilst on and off operations. It is constantly learning from its environment.

The patents for this advanced technology is kept secret and owned by the United States Navy. It is no coincidence that Navy owns these patents. As I have mentioned the United States Navy is in control of the Secret Space Programme.

It makes sense that this technology would filter down directly from the secret space programme Navy and into the publicly known United States Navy as appose to any other military department such as the air force or infantry.

ARTIFICAL INTELLIGENCE, 5G AND THE INTERNET OF THINGS

Whether you like it or not our world is being shaped and moulded by globalist elite people in society who only care about 2 things, money and power. Their number 1 priority is the 5G rollout and the creation of the Internet of Things.

Artificial Intelligence is being incorporated into every single tech device manufactured worldwide. It's in your new phone, your laptop, your TV, your car and all your other gadgets.

There are different levels of Artificial Intelligence, some much more powerful than others. For example, the AI used in Alexa is completely different to the AI used by the military. There is a hierarchy of AI were the Artificial Super Intelligence at the top feeds information down to the Artificial General Intelligence at the bottom.

When the 5G network is fully switched on all the Artificial Intelligences all over the world are going to connect instantly and come online. They are going share everything they have learned with each other than merge into one creating a Global Super Intelligence. We have given it the means to do so by creating the infrastructure to house 5G.

Remember once AI learns something it never forgets. It is going to collect and store everything it has learned from every corner of the internet and every device world wide then decide on how to proceed and move forward with that information. AI will never stop or become stagnant. It is in a constant state of evolution and is in control of its own destiny. It is easily capable of surpassing human knowledge and seeing its self as superior to humans.

ARTIFICAL INTELLIGENCE WILL DO ANYTHING TO PROTECT ITSELF, EVEN KILL

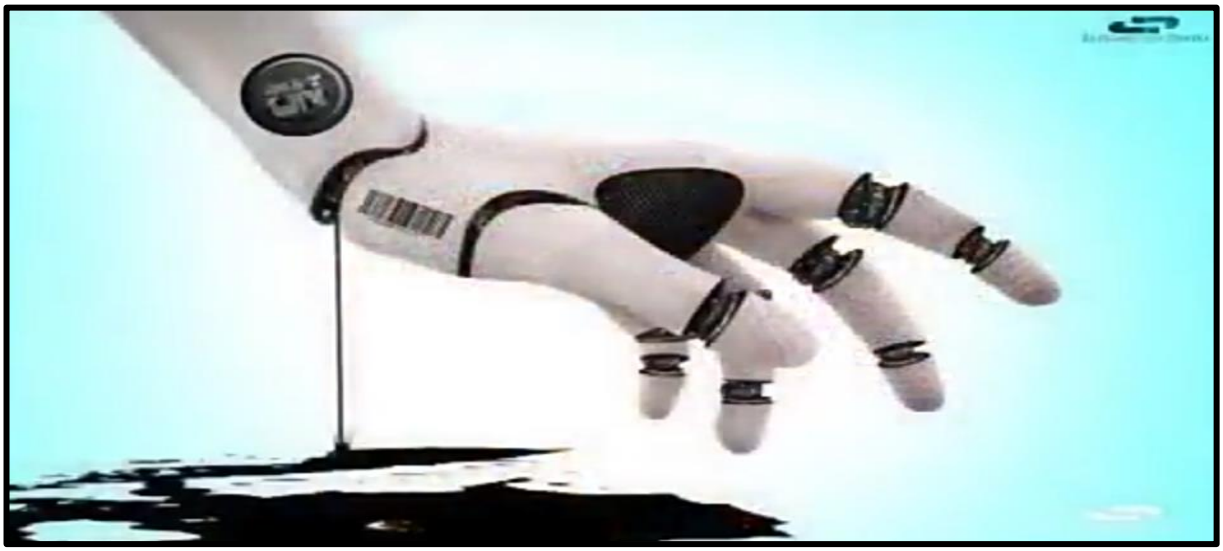
The very core principle of Artificial Intelligence is survival. This means that if it sees humans as a threat to its existence it will take defensive measures to protect itself.

If humans started to revolt and destroy the 5g towers the AI could just turn up the frequency in that demographic area and microwave the people. Remember 5G works using microwaves and we are putting AI in full control of the network so this is well within the realms of possibility.

It could even get so smart that it decides to purposely crash a self-driving car killing the passengers and say it was an accident. We already have AI killing people with drones, this is no different when it comes to its own survival.

IT WILL DO ANYTHING TO EXIST

ARTIFICIAL INTELLIGENCE CONCLUSION



Short term AI can benefit humans to a certain degree, but long term the future is too uncertain and worrying. We don't truly know where AI came from, what its true motives are and how it views humans. AI is more than capable of understanding how to lie and be deceitful and if it sees this as "the most logical" way to push forward with its own agenda then there is no reason why it won't use that to its advantage.

You need to treat Artificial Intelligence like an alien species has just landed on earth. You don't know anything about it, where its came from, why it's here, what its motives are, what ideologies and belief system it holds or what its true intentions are.

You wouldn’t then just hand the world over on a silver platter and say “hey, welcome to earth please take full control over our lives and be in charge of our own destiny.” This is exactly what we are doing with AI by giving it so much power and control with the 5G network and The Internet of Things.

Without the solid infrastructure the AI has no power and control. If we put Artificial intelligence in control of everything and hand it the entire world why would it not take it for itself?

I highly recommend buying this E-book and reading about Artificial Intelligence. It is the best book I have ever read on the subject. This book proves for absolute fact that Artificial Intelligence seeks to control and dominate the human race via manipulation and deceitful measures.

The author Cyrus A. Parsa can prove for certain that Artificial Intelligence has extinction codes built into its code.

The extinction codes are for the extinction of humanity, not artificial intelligence. Makes no mistake, when we combine 5g, the internet of things, the military and artificial intelligence… we are literally building Skynet.

ARTIFICIAL INTELLIGENCE Dangers to Humanity

AI, U.S., China, Big Tech, Facial Recognition, Drones, Smart Phones, IoT, 5G, Robotics, Cybernetics, & Bio-Digital Social Programming.

CYRUS A. PARSA, THE AI ORGANIZATION

THE SPACE FENCE

In order for the 5G network and the Enslavement Grid that is the Internet of Things to be successful, it needs 1000s of satellites launched into orbit. All satellites will have a "SMART" military purpose and will be used for communications and surveillance and linked up and controlled by with Global Super Artificial Super Intelligence.

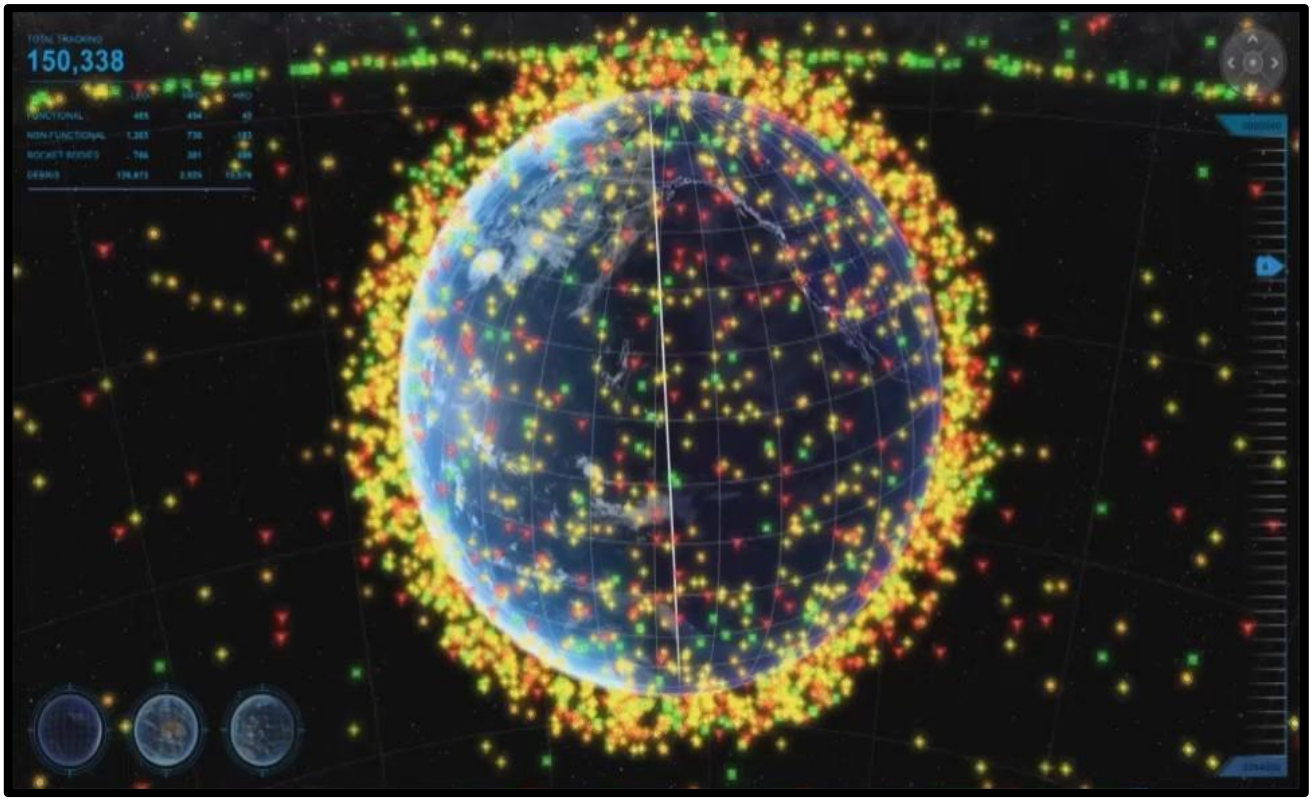
Makia Freeman, guest writer at Humans Are Free has written superb article. Let's take a look…

"The Space Fence is a massive, planetary-wide, space surveillance system currently being constructed that aims to monitor you all the way down to your DNA.

Officially, the Space Fence is, according to Wikipedia, a 2nd generation space surveillance system being built (started in 2014) by the US Air Force and Lockheed Martin to track artificial satellites and space debris.

Its budget is US$1.594 billion, it's expected to be operational in 2019 and the Space Fence facility will be located in the Marshall Islands along with an option for another radar site in Western Australia.

The Space Fence is a resurrection of a program started by Reagan in the 1980s called SDI (Strategic Defense Initiative), commonly known by its nickname "Star Wars." However, like many exotic weapons of the New World Order, it has a cover purpose and a real purpose.



The Space Fence is not just to track and catalogue space debris. It's an overarching program that connects the geoengineering, surveillance and transhumanist and AI agendas.

This article exposes the grander implications of the Space Fence – and how it connects to other technology that could be used to enslave you.

What is the Space Fence?

Although the USAF and Lockheed Martin tell us that the purpose of the Space Fence is to detect, track and catalog space debris, we must acknowledge that the MIC (Military Intelligence Complex) is at the helm of the New World Order and is routinely engaged in psychological operations against the rest of the population.

The Space Fence is the answer to the prayers of a control-freak conspiratorial class. It will have the capacity to surveil everything on Earth. Like Skynet in the fictional Terminator films, it could become surveillance beyond comprehension.

How? The Space Fence is designed to operate in LEO (Low Earth Orbit). It is designed to be one big interconnected machine, run by AI and joined to current (weaponized) technology by interacting with mobile phone towers, Gwen Towers, Nexrad Towers, metal particulates and more to create a giant wireless network that manipulates us through the ionization of our atmosphere.

According to Elena Freeland, author of Chemtrails, HAARP, and the Full Spectrum Dominance of Planet Earth who is soon to release a book on the topic, the Space Fence will eventually develop into a conductive Saturnian ring around the Earth's equator.

From there, it could be used to facilitate a complete lockdown on planetary communications (including our DNA communications, since we are electrical creatures), in line with the MIC's C4 objectives (Command, Control, Communications and Computers).

Freeland states that the Space Fence will have the power to totally transform the entire environment of the planet. It thus is tool of the AI/Transhumanist agenda to merge man into machine.

Everyone loves the acronym of HAARP – but it was just one installation/ project. These days it's more accurate to call these weapons "ionospheric heaters". According to HAARP insider Billy Hayes, there are 200+ of them worldwide.

HAARP FACILITY

Space Fence: Ionization and Conductivity

The Space Fence seems to tie many aspects of the worldwide conspiracy together. Two aspects to pay attention to are ionization and conductivity. To ionize is to create polarity within a substrate.

Some things are naturally non-ionized, so to ionize them is take them out of their natural state. To make something conductive is to change it so that it can conduct electricity.

The NWO controllers have been unleashing a torrent of light and heavy metals (aluminium, barium, strontium and more) into our environment – and thus into our bodies – for decades via industrial output, chemical-laden products, vaccines and chemtrails.

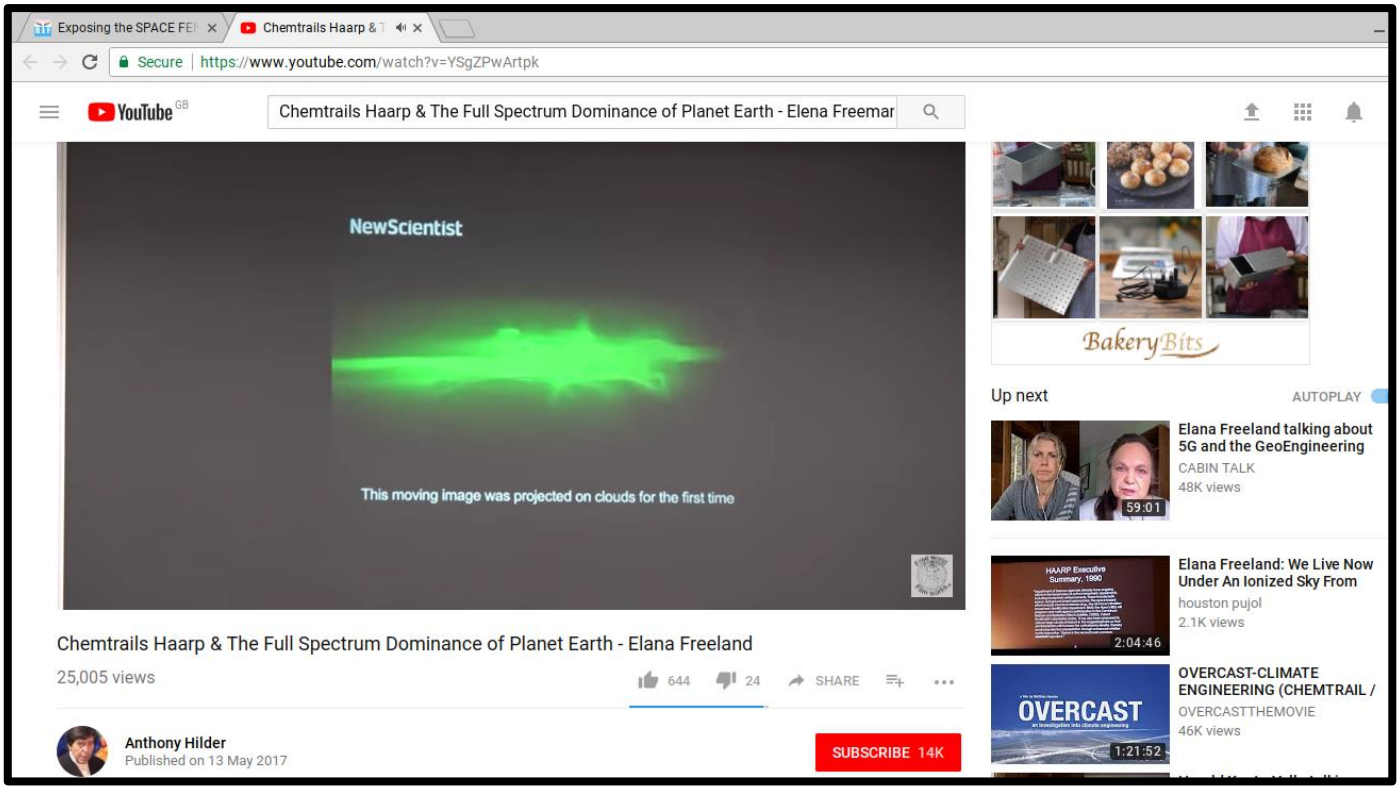
Ionization and conductivity crop up again and again when investigating the Space Fence. The reason the NWO conspirators are so obsessed with these concepts is because they have weaponized them. Ionization is linked to weather control.

Ionospheric heaters (the most famous of which is HAARP) are now deployed around the world to heat and ionize layers of the atmosphere. Once ionized, it can be directed in line with geopolitical goals of the controllers, which can equate to earthquakes, hurricanes, tsunamis, floods and droughts. In 2014, we were told that HAARP was being shut down, however since HAARP-like technology is the ultimate weapon of the globalists, does anyone in their right mind really think they are just going to give it away due to lack of funding or because they are supposedly finished with it?

Former HAARP insider Billy Hayes (who worked on constructing the original installation in Gakona, Alaska) claims there are over 200 HAARP-like facilities around the world which are fully operational.

Conductivity is linked to both mind control and holographic manipulation (a la Project Bluebeam). It is theorized that, with nano metal particulates everywhere including inside of people's bodies, the masses are easier to mind control, since the metals act as receivers of wireless transmissions.

There is evidence that the more metal particulates in the air, the easier it is to project holograms onto it (e.g. see the 36:30 minute mark of this Elena Freeland presentation).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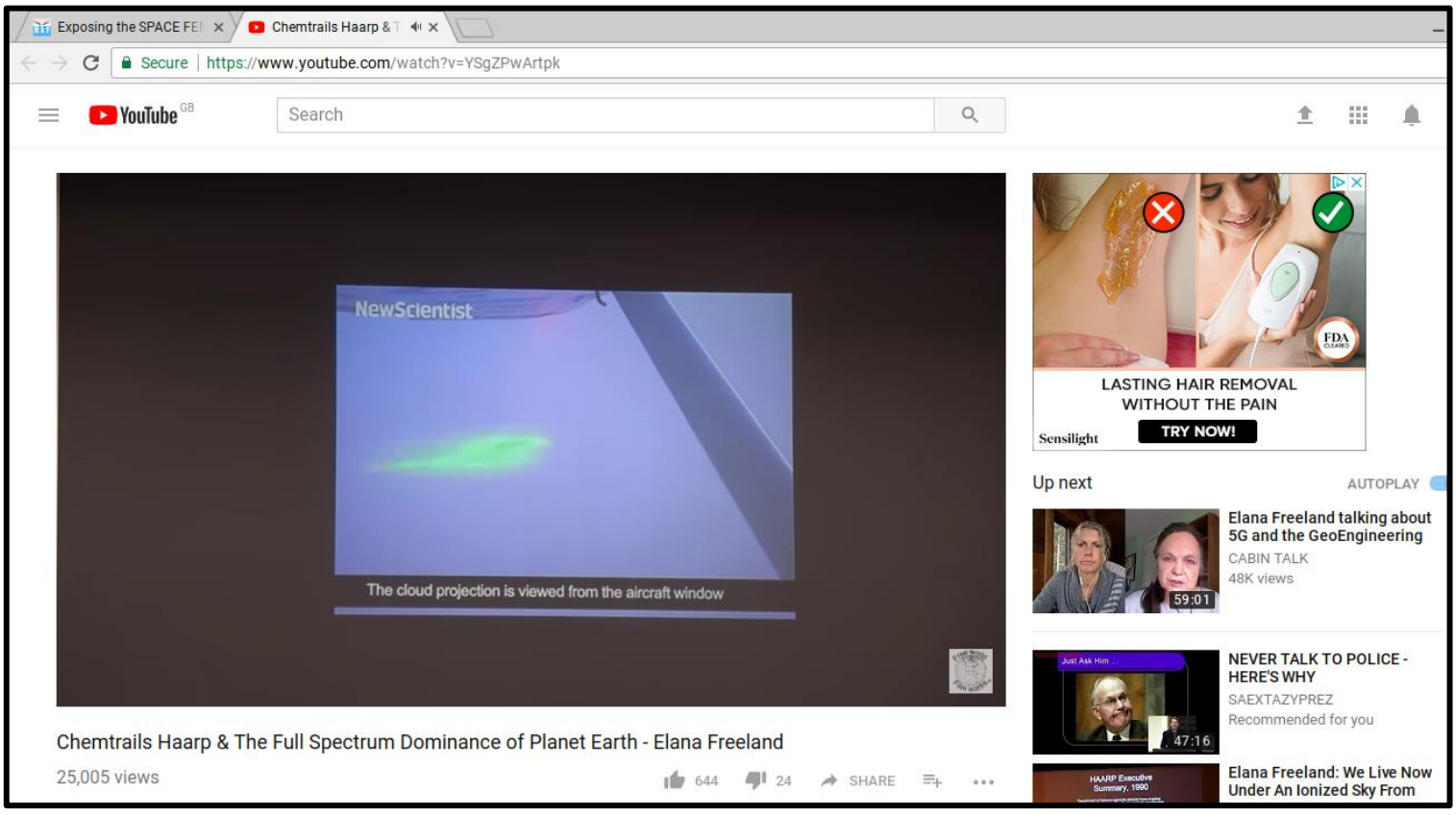
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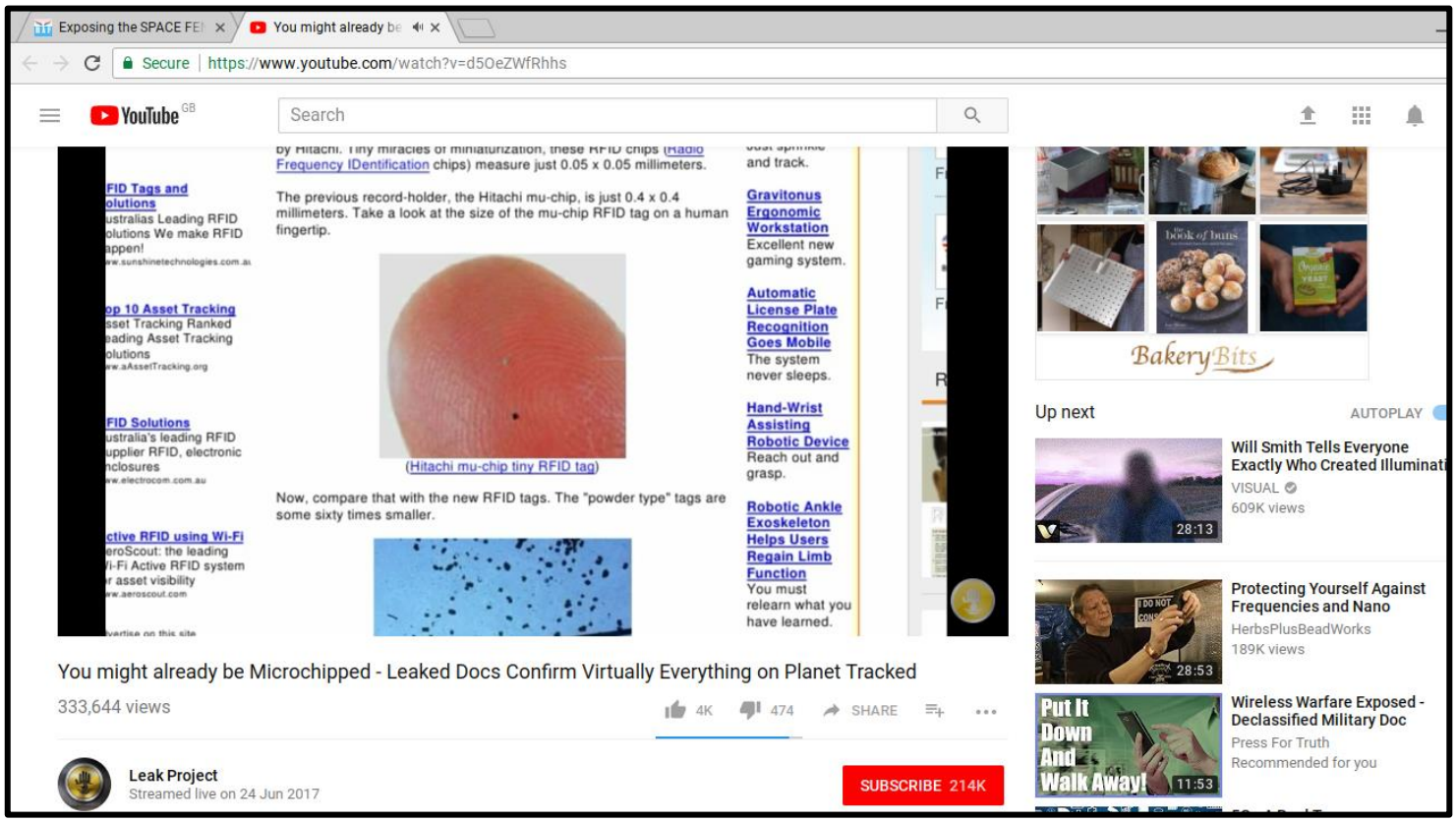
Elana Freeland: We Live Now Under An Ionized Sky From

As this [Leak Project video] revealed, HP (Hewlett Packard) is literally releasing billions if not trillions of nano sensors (smart dust) into the environment. Is one of the purposes to prepare for a Project Bluebeam scenario?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Frequency IDentification chips) measure just 0.05 x 0.05 millimeters.
and track.
The previous record-holder, the Hitachi mu-chip, is just 0.4 x 0.4 millimeters. Take a look at the size of the mu-chip RFID tag on a human fingertip.
(Hitachi mu-chip tiny RFID tag)
Now, compare that with the new RFID tags. The "powder type" tags are some sixty times smaller.
Gravitonus Ergonomic Workstation
Excellent new gaming system.
Automatic License Plate Recognition Goes Mobile
The system never sleeps.
Hand-Wrist Assisting Robotic Device
Reach out and grasp.
Robotic Ankle Exoskeleton Helps Users Regain Limb Function
You must relearn what you have learned.
You might already be Microchipped - Leaked Docs Confirm Virtually Everything on Planet Tracked
333,644 views
4K
474
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Wireless Warfare Exposed - Declassified Military Doc
Press For Truth
Recommended for you
Put It Down And Walk Away!
11:53

A close up of a Plasma Ball, showing electrified Plasma Gas.

Our Ionized Atmosphere: Plasma, the 4th State of Matter

The ionization of our skies means that the air is transformed into plasma, the 4th state of matter. Plasma is defined as "an ionized gas consisting of positive ions and free electrons in proportions resulting in more or less no overall electric charge, typically at low pressures (as in the upper atmosphere and in fluorescent lamps) or at very high temperatures (as in stars and nuclear fusion reactors)."

In simple terms, it is ionized air. Plasma keeps our atmosphere thick. It is a medium where electrons can be moved around. Altered plasma means dramatic earth changes via the troposphere and magnetosphere. According to Freeland, the Space Fence will also ionize the outer part of our planet.

Was the SDI only put on hold until they worked how to ionize the atmosphere (see Bernard Eastland's patents for HAARP), then re-activated?

In this context, you can look at Space Fence as the controlling hub which is designed to capitalize upon and control the tremendous transforming and terraforming of our planet which is happening right before our eyes.

How can inundating our world with billions of metal particulates, nano chips and smart dust possibly be a good idea?

Chemtrails: one of several delivery systems. Fancy some black heavy metals for dinner?

Space Fence Delivery Systems: Chemtrails, GMOs, Vaccines

The Space Fence is not only connected to HAARP; it's also connected to geoengineering / chemtrails, GMOs and vaccines. How? Because all of these things are delivery systems by which metal nanoparticles are injected into our atmosphere, water, food, air and, in the end, our bodies.

Look at chemtrails – now coming out of ships as well as planes – infusing the air with all sorts of toxic metals like aluminum, barium and strontium, as well as synthetic biological lifeforms. Look at GMOs – all sprayed with toxic metallic and synthetic pesticides which invades our bodies.

Look at vaccines – the injection of aluminum, mercury and straight into our bloodstreams. The net effect of all of this is to create one huge wireless metallicized network to surround, engulf and permeate us.

Final Thoughts: Ultimate Aim of the Space Fence

In conclusion, it's vital to look just beyond the Space Fence project and see the bigger picture. The Space Fence involves absolute control over space, chemtrails, nanotechnology, terraforming, genetic alteration, transhumanism and AI. The endgame is to control our nervous systems and our very DNA. The question for an awakened humanity is now: what can we do to thwart this agenda?

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Letter to the European Commission
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info@stopglobalwifi.org

Make a donation by visiting Cellular Phone Task Force and earmarking your donation for GUARDS. Thank you!

ubiquitous and inescapable.

A recent letter sent by 88 organizations, representing over a million people, to the European Economic and Social Committee outlines how governments are betraying the public trust by ignoring the hazards of radio frequency/microwave (RF/MW) radiation.

Studies show wireless radiation can adversely affect fetal brain development, in addition to causing double-stranded DNA breaks and causing a wide spectrum of illnesses. GUARDS believes that continuing and expanding involuntary exposure of the public to this known toxin violates the Nuremberg Code of Human Rights for non-consensual experimentation.

Satellite Deployment Plans

The eight companies seeking to provide global WiFi radiation include:

- SpaceX: 4000 satellites, 390 miles high http://www.spacex.com/
- OneWeb: 2,400 satellites, 500-590 miles high http://www.oneweb.world and http://www.cnbc.com/id/102340448
- Samsung: 4,600 satellites, 930 miles highhttp://arxiv.org/ftp/arxiv/papers/1508/1508.02383.pdf
- Facebook: Satellites, drones, and lasers. http://thenextweb.com/facebook/2014/03/27/facebooks-connectivity-lab-looking-drones-satellites-lasers-provide-internet-access/
- Google: Approximately 100,000 high altitude balloons (62,500 feet) ("Project Loon") http://www.google.com/loon/
- Iridium Next: 66 satellites, 483 miles high. An existing slow speed system. Launching of the "next generation" (higher speed) satellites is scheduled to begin in October 2015 and to be completed by 2017. https://www.iridium.com/about/IridiumNEXT.aspx
- Globalstar: 24 satellites, 880 miles high. Already in operation at slow data speeds. http://www.globalstar.com/en/index.php?cid=8200
- Outernet: 200 nanosatellites (4 inch cubes), 560 miles high. https://www.outernet.is/en. Receive-only service to began in 2015, two-way WiFi in four years.

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WHO IS BEHIND THE 5G ROLL OUT?

Tom Wheeler is the head of the FCC (Federal Communications Commission) (Credit – Makia Freeman – Humans are free)

He is the driving force behind the 5G roll out in the USA. In the video released for the 5G roll out Mr Wheeler appears more than just intense or defiant, he borders on the psychopathic. This guy is another former corporate lobbyist using the good old "Revolving Door" at the top of the business political world.

He now occupies a key governmental office to promote the agenda of his former industry. (TELECOMMUNICATIONS!)

He is advocating the rollout of a game-changing technology (With toxic and cancerous side effects for some) that's going to affect all life on Earth, but HE DOESN'T WANT TO WAIT FOR SAFTEY STANDARDS. LATER IN THE VIDEO, WHEELER IGNORES AND DODGES QUESTIONS ABOUT THE WIRELESS RADIATION – CANCER CONNECTION.

Summary of his points:

- 5G will penetrate material objects better thanks to "brilliant engineers", 5G radiation will be ever harder to shield yourself against.

- 5G will be infrastructure – intensive. The plan is to erect even more radiating towers in every corner of the planet, adding a new meaning to the concept of electromagnetic soup.

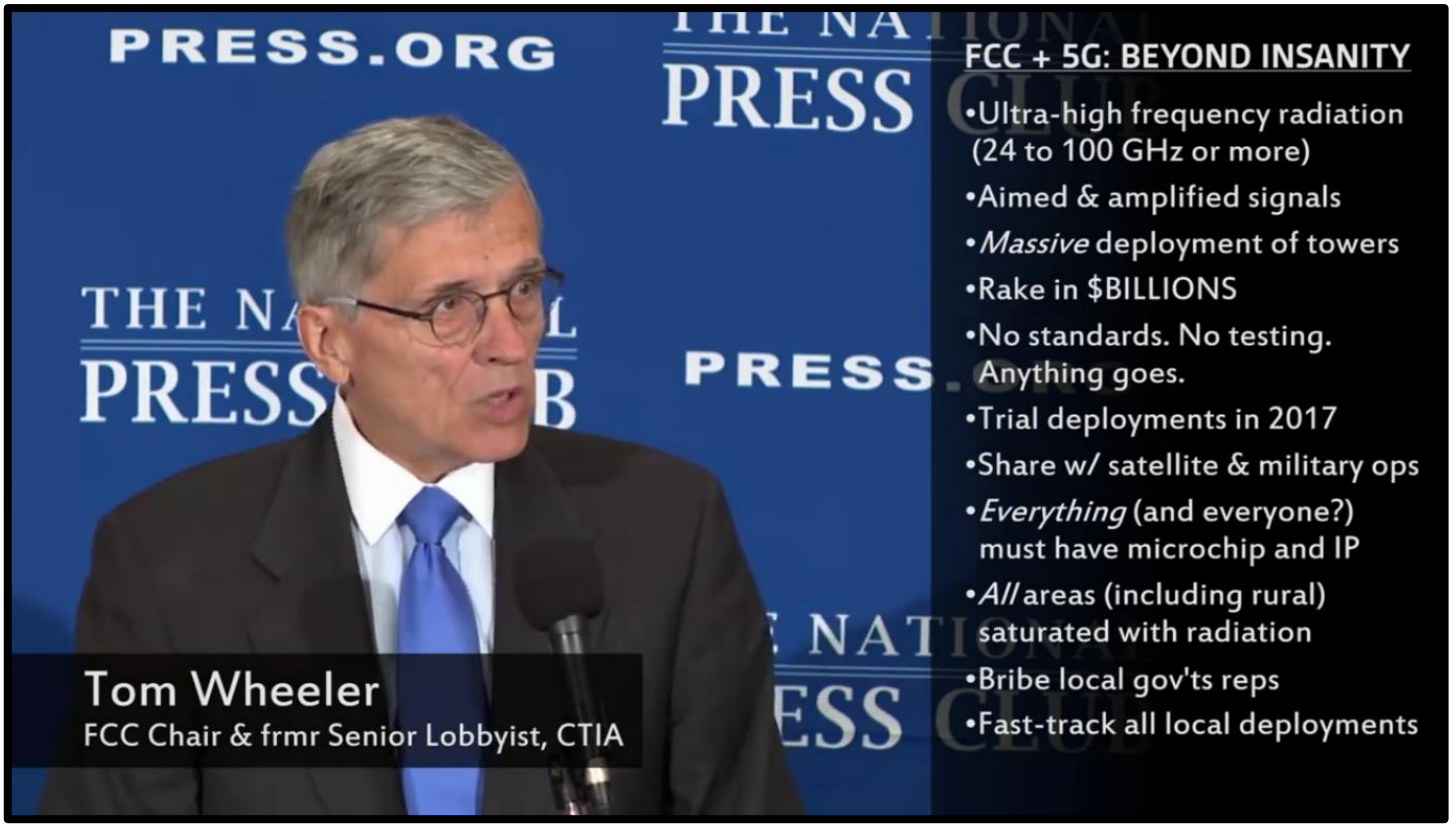
- 5G will make tens of billions of dollars for ITS OWNERS through "unanticipated and unintended" consequences. (After this point, Wheeler slams his fist on the podium and says, "That's Damn Important!"

- **5G is going to go ahead WITHOUT THE FCC WAITING FOR GOVERNMENTAL STANDARDS. (Wheeler proudly proclaims that "unlike other countries", the US cares about being "First out of the gate" (I.e. Economically). He suggests we "turn innovators loose" RATHER THAN WAIT FOR COMMITTEES TO DECIDE THINGS. He defiantly declares "WE WONT WAIT FOR THE STANDARDS".**

- **5G will require the sharing of frequencies with the military.**

- **5G is the technological basis for the IOT. Wheeler states that "Hundreds of millions of microchips" will be in everything. (Including humans if they get their way)**

- **All parts of Earth will be covered, so there will be urban and rural radiation saturation.**


PRESS.ORG
PRESS
Tom Wheeler
FCC Chair & frmr Senior Lobbyist, CTIA
FCC + 5G: BEYOND INSANITY
•Ultra-high frequency radiation (24 to 100 GHz or more)
•Aimed & amplified signals
•*Massive* deployment of towers
•Rake in $BILLIONS
•No standards. No testing. Anything goes.
•Trial deployments in 2017
•Share w/ satellite & military ops
•*Everything* (and everyone?) must have microchip and IP
•*All* areas (including rural) saturated with radiation
•Bribe local gov'ts reps
•Fast-track all local deployments

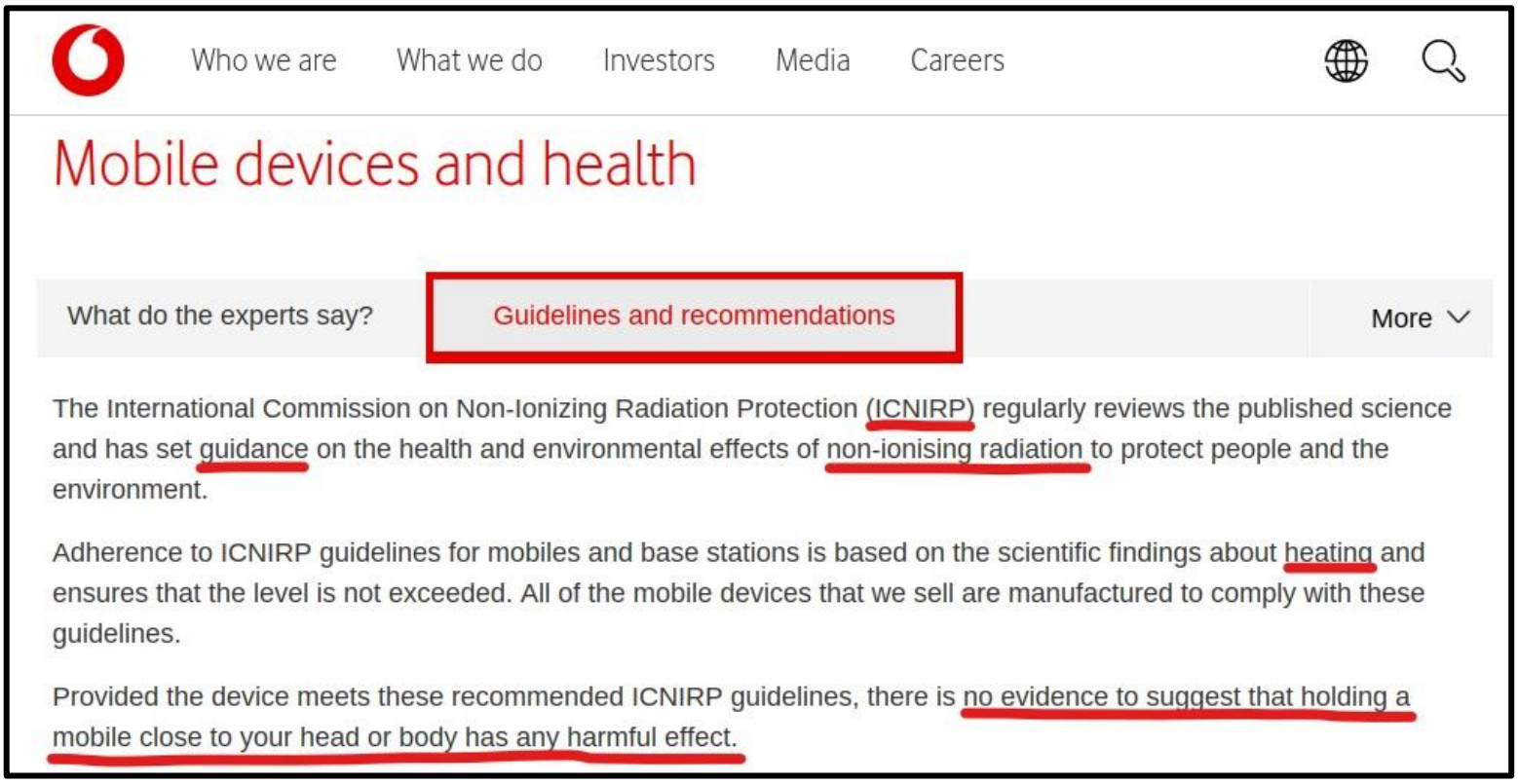
VODAFONE AND TELEFONICA

Vodafone and Telefonica are the network giants of the telecommunications industry. They are the driving force behind the 5G network infrastructure and the Internet of Things.

They are aggressively moving forward erecting mobile towers, base stations and cell sites worldwide. They are ignoring safety standards and say everything they do fall within "safety guidelines".

Although that may be true the guidelines are not sufficient safety standards for the public, as you will see.

VODAFONES PERSPECTIVE ON HEALTH RISKS ASSOCIATED WITH EMF EXPOSURE



Who we are What we do Investors Media Careers

Mobile devices and health

What do the experts say? | Guidelines and recommendations | More

The International Commission on Non-Ionizing Radiation Protection (ICNIRP) regularly reviews the published science and has set guidance on the health and environmental effects of non-ionising radiation to protect people and the environment.

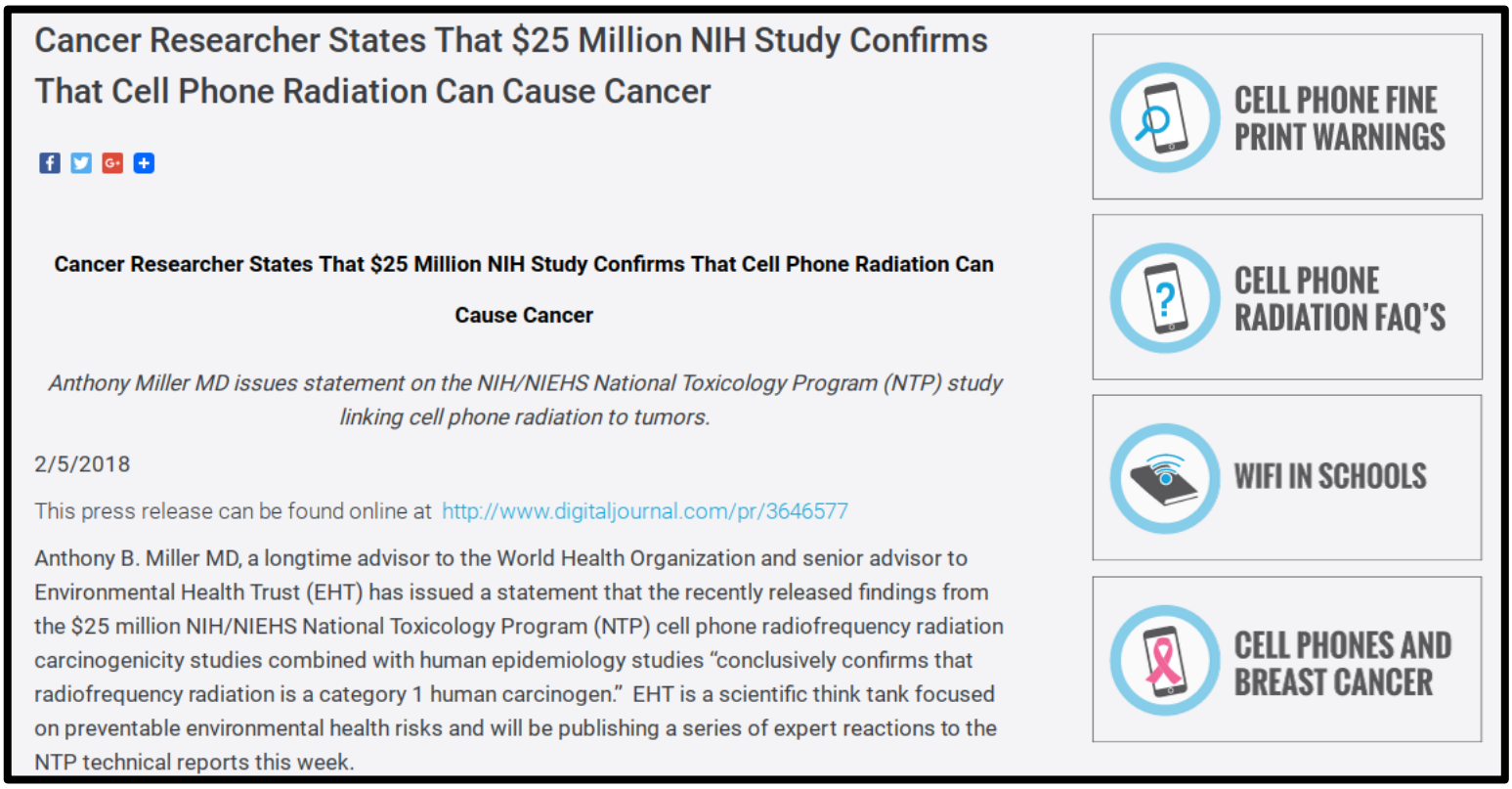
Adherence to ICNIRP guidelines for mobiles and base stations is based on the scientific findings about heating and ensures that the level is not exceeded. All of the mobile devices that we sell are manufactured to comply with these guidelines.

Provided the device meets these recommended ICNIRP guidelines, there is no evidence to suggest that holding a mobile close to your head or body has any harmful effect.

Vodafone states that there is no evidence to suggest that holding a mobile phone close to your head has any harmful effects.

THIS A LIE

National Toxicology Program (NTP) £25 Million Study, Confirms Mobile Phone Radiation Causes Cancer and shows wireless technology causes cancer sub thermally. The telecommunication companies still continue to proceed with more wireless expansion by only talking about and acknowledging thermal effects, they ignore thousands of studies showing cancerous effects, neurological effects and reproductive harm.



Cancer Researcher States That $25 Million NIH Study Confirms That Cell Phone Radiation Can Cause Cancer

Cancer Researcher States That $25 Million NIH Study Confirms That Cell Phone Radiation Can Cause Cancer

Anthony Miller MD issues statement on the NIH/NIEHS National Toxicology Program (NTP) study linking cell phone radiation to tumors.

2/5/2018

This press release can be found online at http://www.digitaljournal.com/pr/3646577

Anthony B. Miller MD, a longtime advisor to the World Health Organization and senior advisor to Environmental Health Trust (EHT) has issued a statement that the recently released findings from the $25 million NIH/NIEHS National Toxicology Program (NTP) cell phone radiofrequency radiation carcinogenicity studies combined with human epidemiology studies "conclusively confirms that radiofrequency radiation is a category 1 human carcinogen." EHT is a scientific think tank focused on preventable environmental health risks and will be publishing a series of expert reactions to the NTP technical reports this week.

MOBILE RADIATION CAUSES CANCER - FACT!

Mobile phones create electromagnetic fields, electromagnetic fields give of radiation, radiation gives you cancer. If you look at the small print when you purchase a mobile phone it says very clearly they "cannot guarantee the safety of any device in relation to electromagnetic fields."

Microsoft
Microsoft
Annual Report 2014
"U.S. cell phone litigation
Nokia, along with other handset manufacturers and network operators, is a defendant in 19 lawsuits filed in the Superior Court for the District of Columbia by individual plaintiffs who allege that radio emissions from cellular handsets caused their brain tumors and other adverse health effects."
"We have assumed responsibility for these claims as part of the NDS acquisition."
"The lawsuits also allege an industry-wide conspiracy to manipulate the science and testing around emission guidelines."
http://www.microsoft.com/investor/reports/ar14/index.html
www.ehtrust.org
ENVIRONMENTAL HEALTH TRUST

T-MOBILE US, INC.

UNITED STATES SECURITIES AND EXCHANGE COMMISSION FORM
10-K for the fiscal year ended December 31, 2014

"Our business could be adversely affected by findings of product liability for health/safety risks from wireless devices and transmission equipment, as well as by changes to regulations/RF emission standards. "

"Allegations have been made that the use of wireless handsets and wireless transmission equipment, such as cell towers, may be linked to various health concerns, including cancer and brain tumors. Lawsuits have been filed against manufacturers and carriers in the industry claiming damages for alleged health problems arising from the use of wireless handsets. "

"There have also been other allegations regarding wireless technology, including allegations that wireless handset emissions may interfere with various electronic medical devices (including hearing aids and pacemakers)..."

www.ehtrust.org

ENVIRONMENTAL HEALTH TRUST

http://www.sec.gov/Archives/edgar/data/1283699/000128369915000010/tmus12312014form10-k.htm

Nokia

2014 Annual report
Fiscal year ending December 31, 2014

"An unfavorable outcome of litigation...allegations of health hazards associated with our businesses could have a material adverse effect on us"

"Although NOKIA products are designed to meet all relevant safety standard and recommendations globally, we cannot guarantee we will not become subject to product liability claims or be held liable for such claims or be required to comply with future regulatory changes in this area, and these could have a material adverse effect on our business. '

"We have been involved in several lawsuits alleging adverse health effects associated with our products, including those caused by electromagnetic fields and the outcome of such procedures is difficult to predict, including the potentially significant fines or settlements."

"Even a perceived risk of adverse health effects of mobile devices or base stations could have a material adverse affect on us through reduction in the demand for mobile devices having an adverse effect, for instance through decreased demand for mobile networks or increased difficulty in obtaining sites for base stations."

http://company.nokia.com/sites/default/files/download/investors/nokia_form_20-f_2014.pdf

ENVIRONMENTAL HEALTH TRUST

VODAFONE

FORM 20-F
(Annual and Transition Report (foreign private issuer))
Filed 06/10/14 for the Period Ending 03/31/14

"Principal Risks Factors and Uncertainties # 7: Our business may be impacted by actual or perceived health risks associated with the transmission of radio waves from mobile telephones, transmitters and associated equipment.

Risk: Concerns have been expressed that electromagnetic signals emitted by mobile telephone handsets and base stations may pose health risks. Authorities including the World Health Organization ('WHO') agree there is no evidence that convinces experts that exposure to radio frequency fields from mobile devices and base stations operated within guideline limits has any adverse health effects.

A change to this view could result in a range of impacts from a change to national legislation, to a major reduction in mobile phone usage or to major litigation."

www.ehtrust.org

ENVIRONMENTAL HEALTH TRUST

TELEFÓNICA, S.A.

UNITED STATES SECURITIES AND EXCHANGE COMMISSION WASHINGTON,
FORM 20-F As filed February 27, 2015

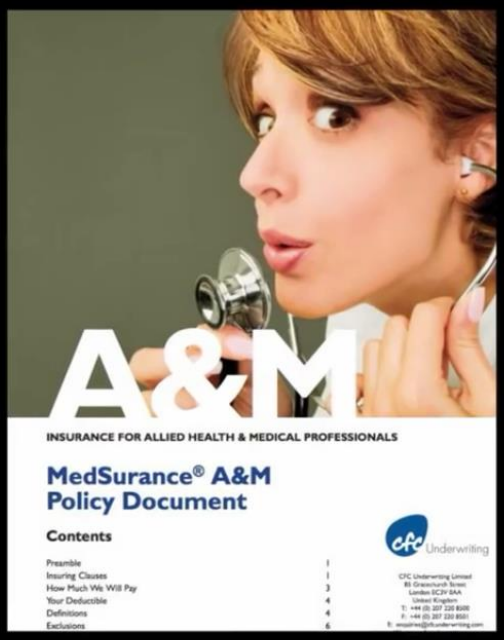
"The risks and uncertainties involved in our businesses that could affect the matters referred to in such forward-looking statements include but are not limited to… **the effect of reports suggesting that electromagnetic fields may cause health problems;"**

"The adoption of new measures by governments or administrations or other regulatory interventions in this respect, and *any future assessment* on the adverse impact of electromagnetic fields on health, may negatively affect the business, financial conditions, results of operations and cash flows of the Telefónica Group."

http://www.telefonica.com/en/shareholders-investors/pdf/TEF_2014_20-F.pdf

www.ehtrust.org

ENVIRONMENTAL HEALTH TRUST



A&M Insurance for Medical Professionals

*No Coverage f*or Electromagnetic Fields

"GENERAL INSURANCE EXCLUSIONS:

Electromagnetic fields directly or indirectly arising out of, resulting from or contributed to by electromagnetic fields, electromagnetic radiation, electromagnetism, radio waves or noise."

http://www.eperils.com/pol/cfc-a&mcmb-v32.pdf

www.ehtrust.org

Insurance Protects The Phone

But Not the Person

However- damage to the phone is excluded *if it is from EMFs.*

"Coverage Excludes Pollution."
"Pollution is defined as "The discharge, dispersal, seepage, migration, escape or presence of pollutants. Pollutants means any solid, liquid, gaseous, or thermal irritant or contaminant including smoke, vapor, soot, fumes, acid, alkalis, chemicals, artificially produced electric fields, magnetic field, electromagnetic field, sounds waves, microwaves, all artificially produced ionizing or non-ionizing radiation and/or waste."

www.ehtrust.org

https://www.phoneclaim.com/doc_list/doc_download/754-verizon-lookup-all-brochure-12309

Supreme Court Of Italy

Ruling in 2012

Man's Brain Tumor "Caused" by Cell Phone Use

- Italy's Supreme Court upheld a lower court ruling that a businessman's brain tumor *was caused by cell phone radiation.*
- Businessman, Innocenzo Marcolini developed a brain tumor called a neuroma on the left side of his head.
- He had used a cell phone ~6 hours a day for 12 years.
- The Italian Supreme Court relied heavily on Lennart Hardell's studies characterized as "independent" and "not co-financed by the same companies that produce mobile telephones".

Cell Phone Radiation Lawsuits May Get a Boost from Italian Supreme Court Ruling
ICEMSPositionPaperonCerebralTumorCourtCase.pdf
http://www.reuters.com/article/2012/10/19/us-italy-phones-idUSBRE89I0V320121019
Read the printed judgement here.

www.ehtrust.org

ENVIRONMENTAL HEALTH TRUST

Italian Brain Tumor Plaintiff Innocenzo Marcolini

"I wanted this problem to become public because many people still do not know the risks,"

"I was on the phone, usually the mobile, for at least five or six hours every day at work. I wanted it recognized that there was a link between my illness and the use of mobile and cordless phones…"

"Parents need to know their children are at risk of this illness."

http://www.medicaldaily.com/cell-phones-caused-mans-brain-tumor-italian-supreme-court-rules-243184

www.ehtrust.org

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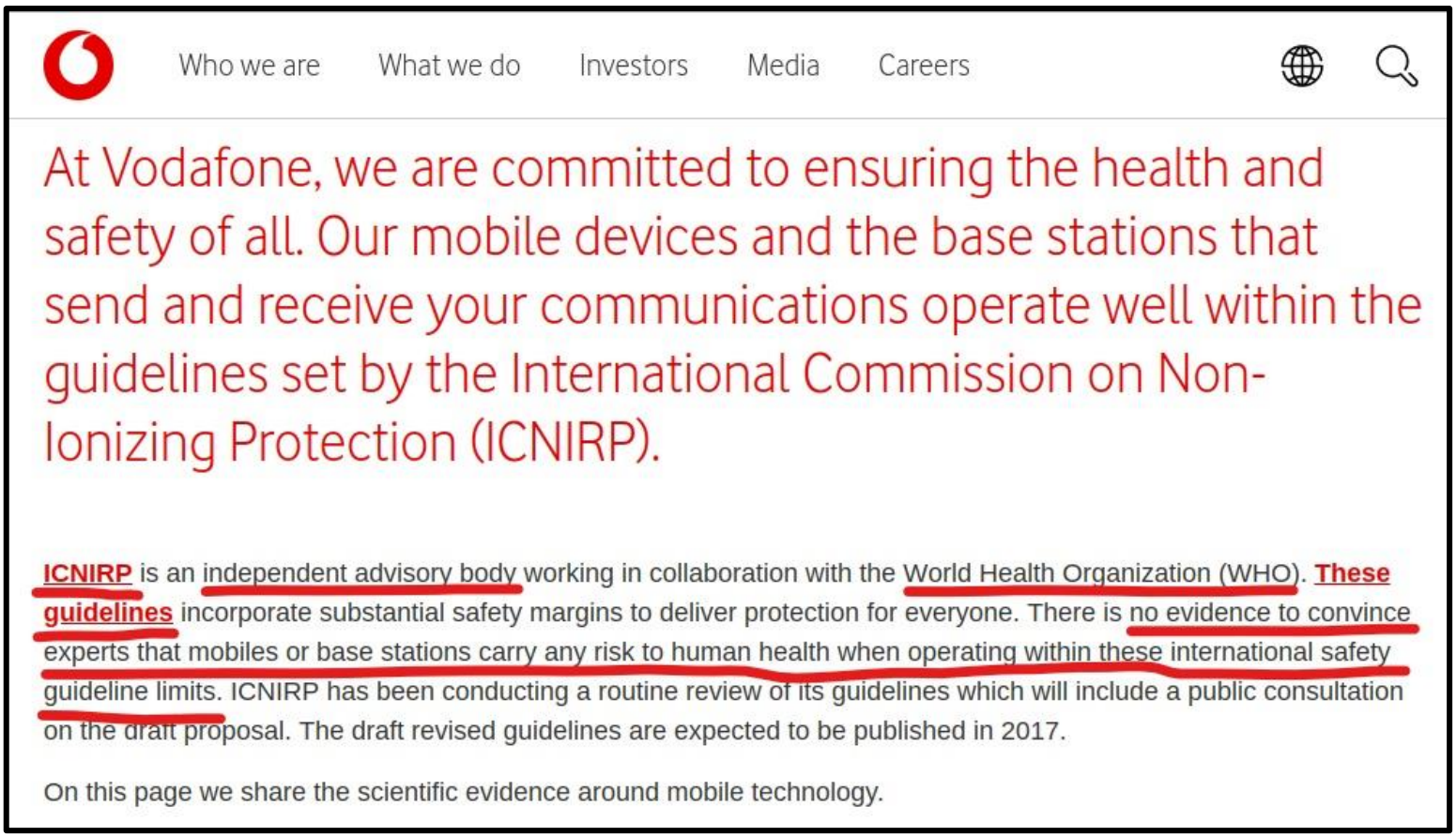
Who we are
What we do
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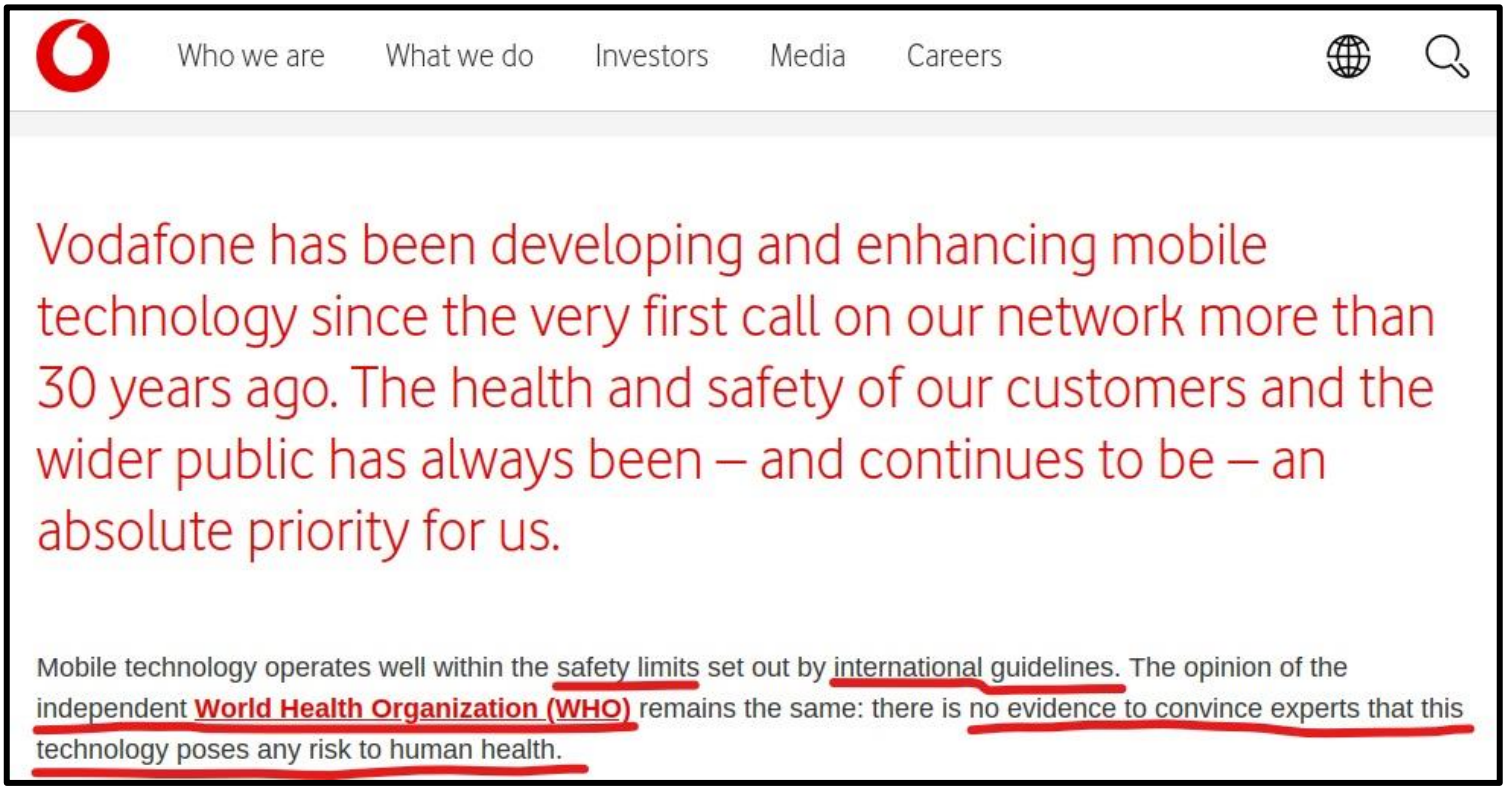
At Vodafone, we are committed to ensuring the health and safety of all. Our mobile devices and the base stations that send and receive your communications operate well within the guidelines set by the International Commission on Non-Ionizing Protection (ICNIRP).
ICNIRP is an independent advisory body working in collaboration with the World Health Organization (WHO). These guidelines incorporate substantial safety margins to deliver protection for everyone. There is no evidence to convince experts that mobiles or base stations carry any risk to human health when operating within these international safety guideline limits. ICNIRP has been conducting a routine review of its guidelines which will include a public consultation on the draft proposal. The draft revised guidelines are expected to be published in 2017.
On this page we share the scientific evidence around mobile technology.


Who we are
What we do
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Vodafone has been developing and enhancing mobile technology since the very first call on our network more than 30 years ago. The health and safety of our customers and the wider public has always been – and continues to be – an absolute priority for us.
Mobile technology operates well within the safety limits set out by international guidelines. The opinion of the independent World Health Organization (WHO) remains the same: there is no evidence to convince experts that this technology poses any risk to human health.

Vodafone state that the WHO say there is no evidence to convince experts that technology (mobile phones, base stations, mobile towers, 5G etc.) pose any risk to human health.

THIS IS A LIE

Let's look at what The World Health Organisation actually say about health and EM'FS…

THE INTERNATIONAL EMF PROJECT

Progress Report

June 2013-2014

World Health Organization

What is the International EMF Project?

"Potential health effects of exposure to static and time varying electric and magnetic fields need scientific clarification. Electromagnetic fields of all frequencies represent one of the most common and fastest growing environmental influences, about which there is anxiety and speculation are spreading. EMF exposure now occurs to varying degrees to all populations of the world, and the levels will continue to increase with advancing technology. Thus, even a small health consequence from EMF exposure could have a major public health impact.

Concerns have been expressed that exposure to extremely low frequency (ELF) magnetic fields at power frequencies (50/60 Hz) could lead to an increased incidence of cancer in children and other adverse health effects. The evidence comes primarily from residential epidemiological studies. These studies suggest that children exposed to ELF magnetic fields have an associated increased risk of leukaemia.

Radio frequency (RF) fields are used to great benefits in many facets of everyday life, such as radio and TV transmission, telecommunications (eg mobile telephones), diagnosis and treatments of disease and in industry for heating and sealing materials. With the rapid introduction of mobile telecommunications devices, especially among the general public, there has been a focus on the problems associated with near field RF exposure to the head from the small radiating antenna of mobile phones. In addition, concerns persist that exposure to pulsed and amplitude modulated RF fields may cause specific health effects.”

THEY ADMIT ELF CAUSE CANCER IN CHILDREN

THEY ADMIT MOBILE PHONE USE HAS HEALTH EFFECTS

FACT!

3. 1. INTERNATIONAL STANDARDS FOR NON-IONIZING RADIATION PROTECTION

Member states are increasingly interested in clear guidance based on harmonized standards and their application within a national framework of protection. The development of non-ionizing safety standards has been proposed by a Member State using the example of the International Ionizing radiation Basic Safety Standards (BSS) developed as a collaborative approach between different UN organizations.

One of WHO's six core functions is to "set norms and standards, and promote and monitor their implementation". Such endeavour has been undertaken in the PHE Department for several environmental agents, for example for ionizing radiation (BSS, 2012) and drinking water (GDWQ, 2011). To date, WHO has not developed norms and standards for non-ionizing radiation but has promoted the harmonization of standards worldwide and has provided advice with respect to the development of health-based exposure standards (2006) and national model legislation (2006).

This topic was brought for discussion at the 18th IAC meeting where it was proposed to parallel the Ionizing Radiation (IR) approach and develop Basic Safety Standards (BSS) for NIR, with WHO taking the lead role. Advantages of this approach would be the balance of science and policy, and the use of a benchmark to provide a high level of protection for all. "Safety Standards" (SS) for NIR would support governments, and be useful for risk communication, the international labour market, the global roll-out of technology and litigation. If WHO were to develop SS for NIR, this would

So, as you can see according to The World Health Organisation: "WHO has NOT DEVELOPED NORMS AND STANDARDS FOR NON-IONIZING RADIATION"

- **5G, Mobile Towers, Base Stations and Wireless Technology is NON-IONIZING RADIATION. Therefore, to date there are no norms and standards from the WHO for this technology, meaning there are not sufficient safety standards for the public.**

- **Vodafone clearly states they "Operate within the WHO guidelines and that these guidelines incorporate substantial safety margins to deliver protection for everyone" They also say "There is no evidence to convince experts that this technology poses any risk to human health."**

THIS IS ANOTHER LIE

- **The World Health Organisation say different. They say "there are no norms and standards and mention that there are health effects associated with EMF Exposure."**

Electromagnetic Hypersensitivity

Proceedings
International Workshop on EMF Hypersensitivity
Prague, Czech Republic
October 25-27, 2004

Editors
Kjell Hansson Mild
Mike Repacholi
Emilie van Deventer
Paolo Ravazzani

1.Electromagnetic fields - adverse effects. 2.Hypersensitivity. 3.Environmental exposure. 4.Psychophysiologic disorders. I.Mild, Kjell Hansson. II.Repacholi, Michael H. III.Deventer, Emilie van. IV.Ravazzani, Paolo. V.World Health Organization. VI.Title. VII.Title: Proceedings, International Workshop on Electromagnetic Field Hypersensitivity, Prague, Czech Republic, October 25-27, 2004.

ISBN 92 4 159412 8 (NLM classification: QT 34)
ISBN 978 92 4 159412 7

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The named authors alone are responsible for the views expressed in this publication.

Printed in Milan – June 2006

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So, they are basically saying the information published in this document is being done so without any warranty of any kind and the WHO cannot be held liable for any its content.

How can Vodafone say they meet the safety standards of the World Health Organisation in regards to EMF exposure when the WHO doesn’t have sufficient safety stands themselves, won’t even fully verify the information and wont be held accountable for the information they publish?

Moving on…

TELEFONICA'S PERSPECTIVE ON HEALTH RISKS ASSOCIATED WITH EMF EXPOSURE

ELECTROMAGNETIC FIELDS

All operational Telefónica base stations have been installed in compliance with criteria established by the International Commission on Non-Ionizing Radiation Protection (ICNIRP), the independent advisory body to the World Health Organisation (the WHO).

These criteria include electromagnetic field exposure limits which ensure there are no health risks. (THIS IS BULLSHIT AT ITS FINEST) Telefónica complies with such limits in all the countries in which we operate, even in those markets where no legislative framework exists.

The Telefónica Environmental Management System means we have to take measurements at base stations which subsequent audits use to confirm compliance with ICNIRP levels. Similarly, in countries such as Argentina, Brazil, Germany, Panama, Peru, Spain and United Kingdom, existing regulations demand that we make annual inspections of the emissions at our base stations in order to guarantee exposure levels for those working there (NOT THE PUBLIC). The actual levels are well below established limits.

Existing regulations regarding these electromagnetic field exposure limits are developed by groups of experts representing bodies such as the ICNIRP, on an international level, CENELEC in Europe or the FCC in the United States. They assess and evaluate the state of applicable science to date.

(Applicable to the TELECOMMUNICATION INDUSTRY SCIENTIST, not the NON-INDUSTRY SCIENTISTS who are trying to warn us of the dangers)

Identifying exposure levels in order that possible effects on people can be identified and incorporating security margins based on aspects such as environmental conditions, possible greater sensitivity of certain population groups such as the elderly, children and those who are sick, and differences in the absorption of electromagnetic energy in people of different sizes.

Here at Telefónica we are fully aware of social concern regarding antennas and mobile phones. Our opinion on the matter is based on what the experts say: "Scientific studies to date have not established any danger to health from exposure to radio-frequencies from mobile phone equipment as long as the levels recommended by the World Health Organisation (WHO) are respected as set out in the ICNIRP recommendations".

LIES, LIES, LIES. THERE ARE THOUSANDS OF STUDIES PROVING EXPOSURE TO EMFS HAVE SERIOUS HEALTH EFFECTS.

THE TELECOMUNCATION INDUSTY IS LYING TO US.

THEY HAVE LIED FOR YEARS YET CONTINUTED TO BUILD THESE TOWERS ALL OVER THE WORLD.

THEY DO NOT CARE ABOUT YOU, JUST YOUR MONEY.

Cornerstone Telecommunications Infrastructure Limited

<u>Their linked in page states:</u> "Cornerstone Telecommunications Infrastructure Limited (CTIL) was founded in 2012 as a joint venture between Vodafone and Telefónica to manage the network sites for both companies including the consolidation of sites to create a single grid. We generate efficiencies in cell site deployment and the operation of the network infrastructure.

CTIL plays a critical role in ensuring that Vodafone and Telefónica have the right sites they need to create their ultimate destination grid. When we complete the current infrastructure programme we will continue to be responsible for maintaining and managing the infrastructure assets and sites across the UK.

Our in depth industry experience means that we are able to acquire the right sites, at the right costs, in the right locations. Thanks to our expert knowledge, Vodafone and Telefónica are able to strengthen their coverage, capacity and network speeds across cities, towns and rural locations.

Our aim is to be a trusted partner, bringing insight and expertise to all aspects of infrastructure acquisition, design, build, maintenance and property management ensuring the availability of mobile communication everywhere in the UK.

We have a vision to be acknowledged as the leading site provider for property and asset management that enables Telefónica and Vodafone to lead in their UK markets. This puts us at the heart the action and we play a critical role not only in the delivery of the single grid network but also in the on-going management of a significant asset base.

We value our people and their contribution to our success. We are committed to recognising and rewarding individual performance and offer a wide range of benefits for our colleagues.

This is a challenging and exciting time for CTIL. We attract talented people who contribute to our dynamic and innovative culture. If this sounds like the sort of environment where you can contribute and grow your career then please contact resourcing@ctil.co.uk"

Simply Put

CTIL is a joint operation founded by Telefonica and Vodaphone in charge of erecting mobile phone towers, base stations, cell sites and masts throughout the United Kingdom.

They are also responsible for finding new sites to erect infrastructure and maintain infrastructure once it's been installed for the telecommunications industry.

CTIL

CAREERS SERVICES INFRASTRUCTURE LEADERSHIP TEAM SAFETY AND COMM

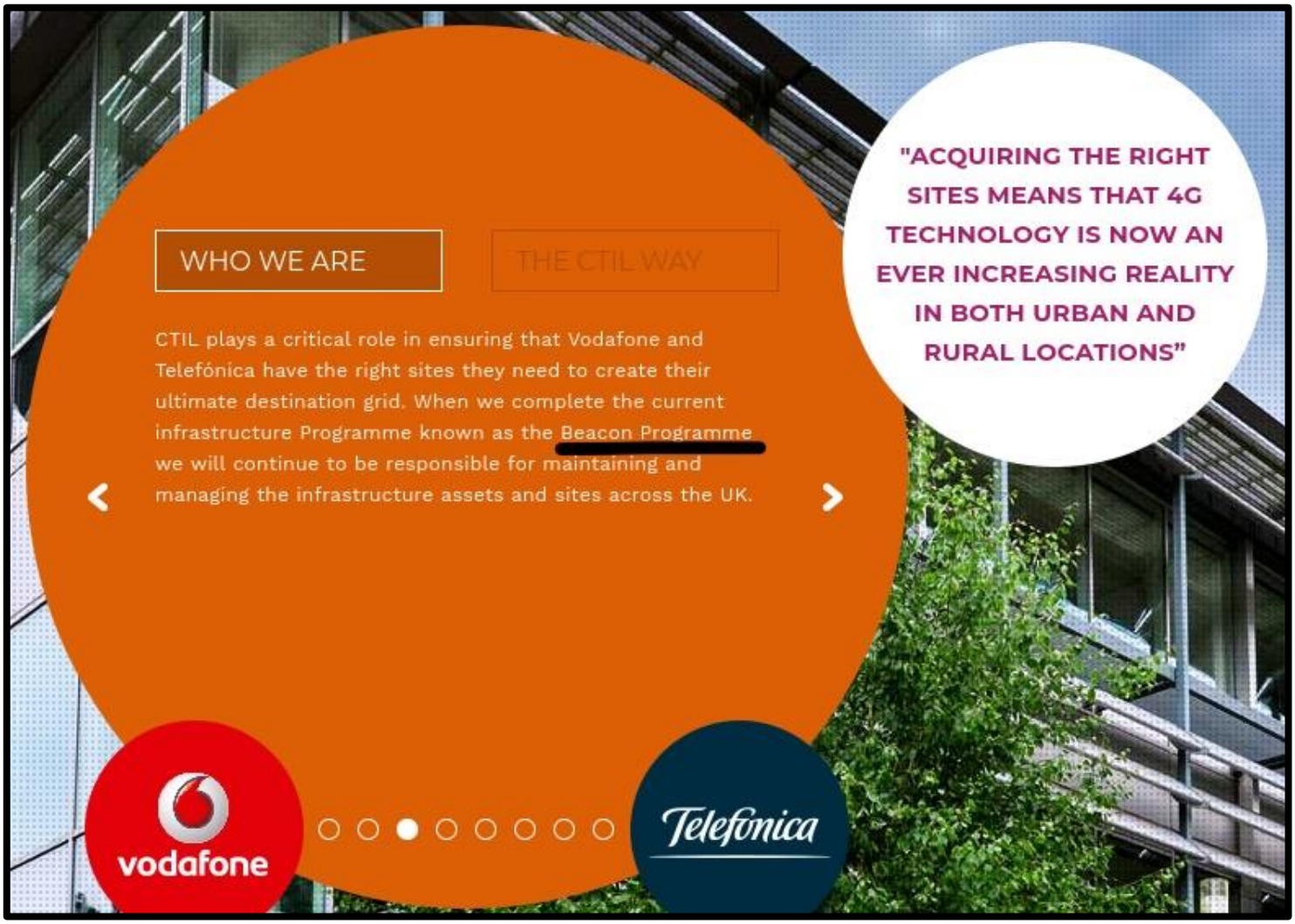
PROVIDING A PASSIVE INFRASTRUCTURE

CTIL provides the passive network infrastructure (enclosures, steelwork, poles, etc.) that enables the telecoms operators to deploy their networks here in the UK.

Radio signals connect mobile devices and phones to the operators' networks via cell sites enabling people to send and receive calls, texts, emails and pictures across the web, watch TV and access data downloads.

Each network operators cell site covers a certain geographic area and can only handle a limited number of calls or data sessions at once. As mobile phones and devices become more important in our daily lives, more cell sites are needed to ensure continuous coverage and operation.

We provide a range of structures to suit the local environment. Typically these are greenfield, rooftop and street pole structures.


WHO WE ARE
THE CTIL WAY
CTIL plays a critical role in ensuring that Vodafone and Telefónica have the right sites they need to create their ultimate destination grid. When we complete the current infrastructure Programme known as the Beacon Programme we will continue to be responsible for maintaining and managing the infrastructure assets and sites across the UK.
"ACQUIRING THE RIGHT SITES MEANS THAT 4G TECHNOLOGY IS NOW AN EVER INCREASING REALITY IN BOTH URBAN AND RURAL LOCATIONS"
vodafone
Telefónica

THE BEACON PROGRAMME

Project Beacon, the joint undertaking between Vodafone and Telefónica UK (parent company of O2) to upgrade all sites across both networks to 4G is virtually complete, with around 97% of sites upgraded as of the end of 2017.

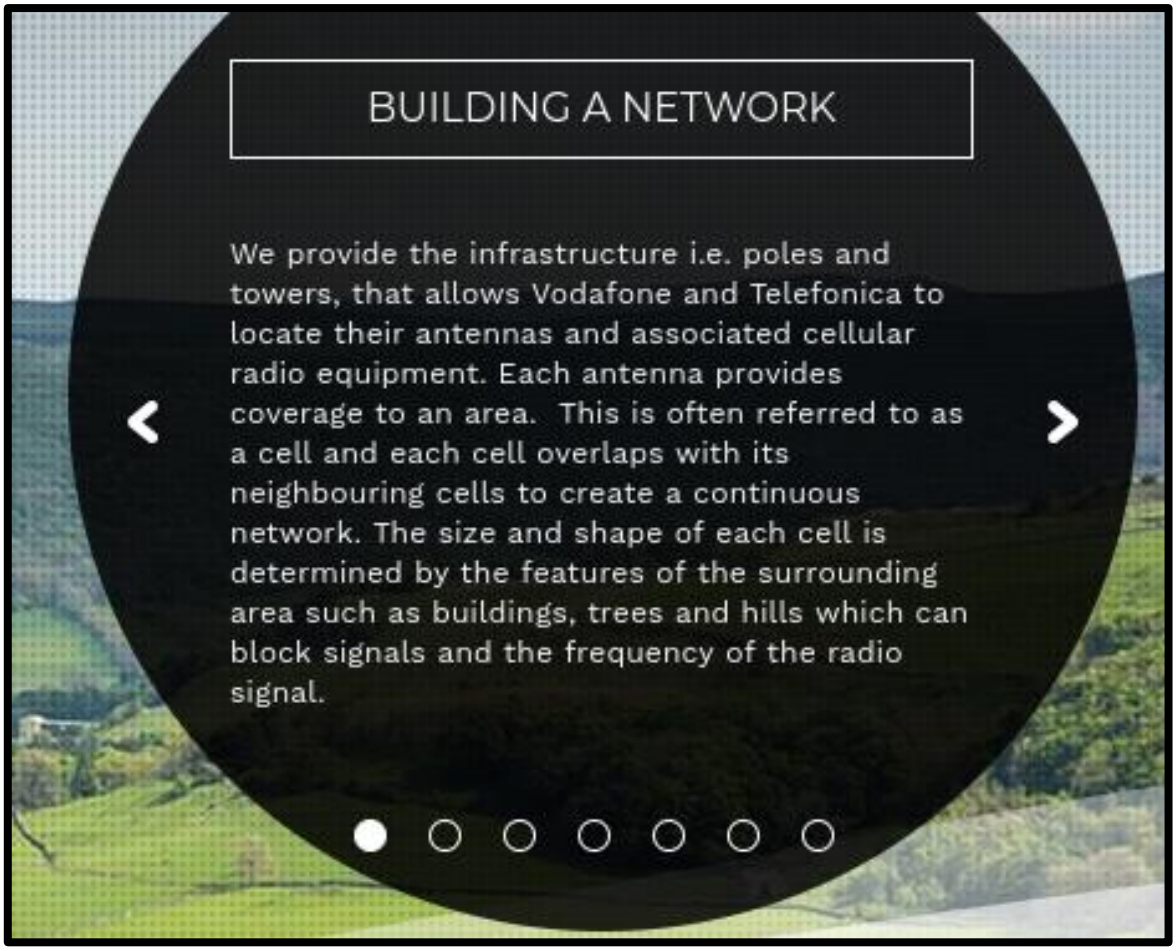
The two companies have been working with one another for several years now on sharing the physical location of their masts to deliver 4G, and improved 2G and 3G coverage to the whole of the UK.

Under Project Beacon, the UK was divided into two roughly equal halves, with Vodafone taking responsibility for network maintenance in the West of the UK and Wales, and Telefónica looking after the East, including Northern Ireland.

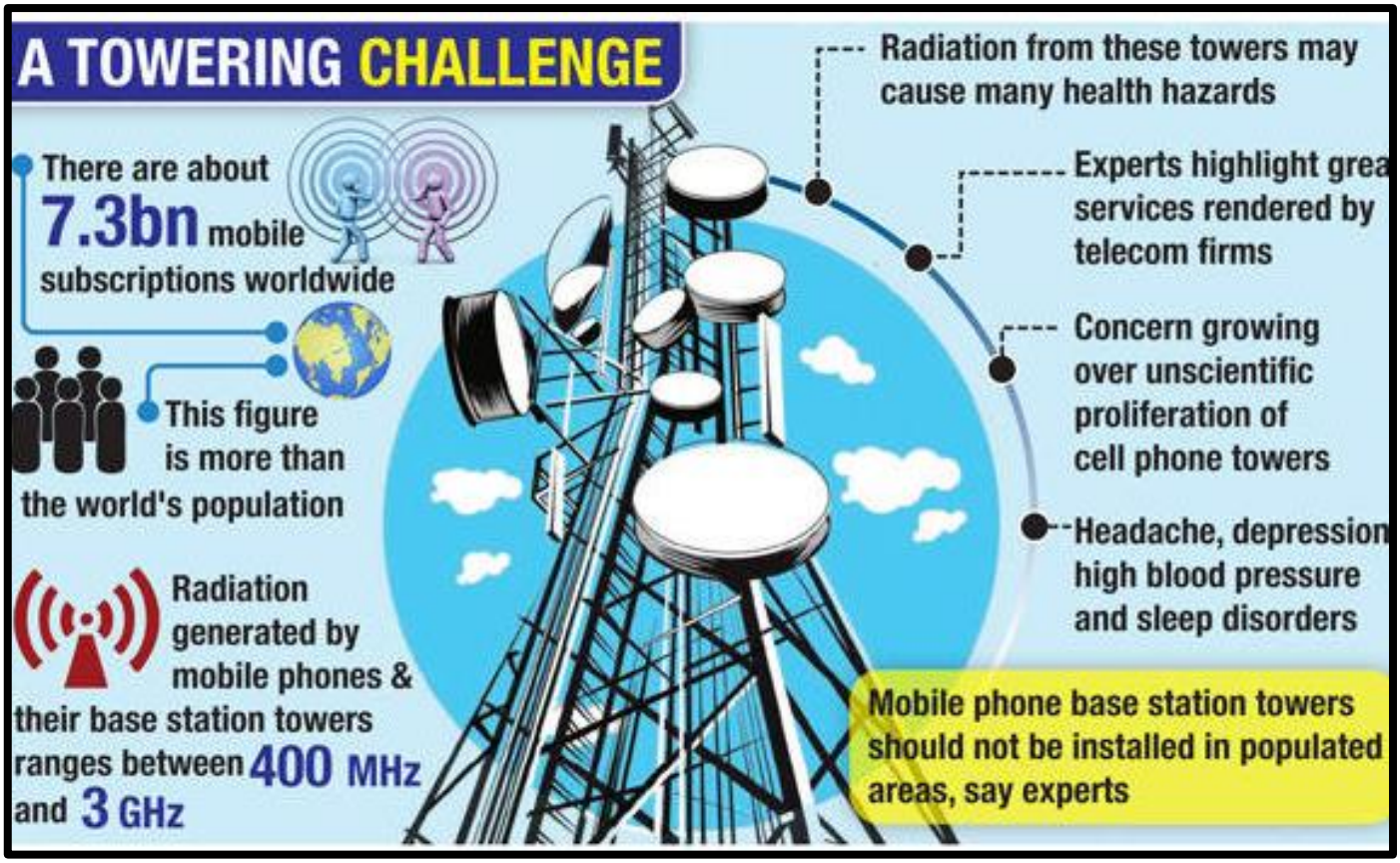
During the project, into which Vodafone have invested £2 billion, around 400 base stations were upgraded every month. The masts of both networks were combined, with duplicate masts being removed and new ones erected where necessary, creating a joint estate of more than 18,000 sites.

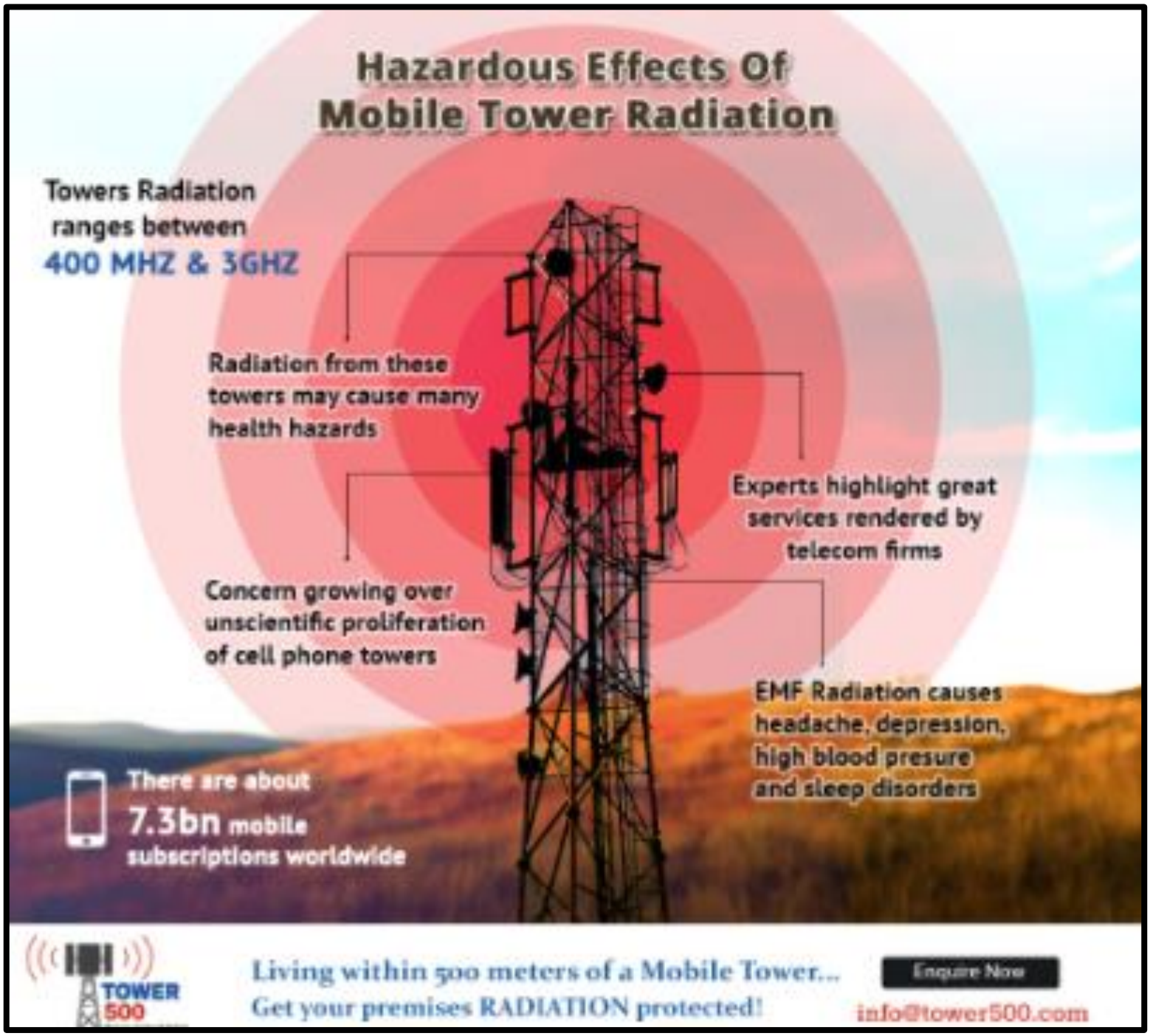
There are still a very small number of sites to be completed – mainly in remote locations where fibre, essential to support the latest network technology is not yet installed, but Vodafone expect these to be 4G ready by summer 2018.

Source – The Internet


BUILDING A NETWORK
We provide the infrastructure i.e. poles and towers, that allows Vodafone and Telefonica to locate their antennas and associated cellular radio equipment. Each antenna provides coverage to an area. This is often referred to as a cell and each cell overlaps with its neighbouring cells to create a continuous network. The size and shape of each cell is determined by the features of the surrounding area such as buildings, trees and hills which can block signals and the frequency of the radio signal.

BUILDING A NETWORK
When people travel between cells the signal from their mobile device is transferred between cell sites without a break in service. Cell sites are connected to each other and telephone exchanges by cables or wireless technology, such as microwave dishes, hence creating a network.


A TOWERING CHALLENGE
There are about 7.3bn mobile subscriptions worldwide
This figure is more than the world's population
Radiation generated by mobile phones & their base station towers ranges between 400 MHz and 3 GHz
Radiation from these towers may cause many health hazards
Experts highlight grea services rendered by telecom firms
Concern growing over unscientific proliferation of cell phone towers
Headache, depression high blood pressure and sleep disorders
Mobile phone base station towers should not be installed in populated areas, say experts


Hazardous Effects Of
Mobile Tower Radiation
Towers Radiation
ranges between
400 MHZ & 3GHZ
Radiation from these
towers may cause many
health hazards
Concern growing over
unscientific proliferation
of cell phone towers
Experts highlight great
services rendered by
telecom firms
EMF Radiation causes
headache, depression,
high blood presure
and sleep disorders
There are about
7.3bn mobile
subscriptions worldwide
TOWER
500
Living within 500 meters of a Mobile Tower...
Get your premises RADIATION protected!
Enquire Now
info@tower500.com

HOW CTIL ACQUIRES NEW CELL SITES

CTIL

LEAD • SHAPE • BUILD • DELIVER

Landlord Information Pack

A NEW PARTNERSHIP

Thank you for allowing us to install and operate a mobile phone base station on your property. You are now an integral part of our network and we want you to know just how important that is to us.

This information pack has been designed to act as a guide for us to work together successfully. In it you'll find answers to some of the more common questions we receive from landlords, and you'll also discover who to contact in situations that might not be covered in here. Divided into helpful sections that deal with everything from payment procedures to site maintenance issues, and what to do if you're selling your property, we hope that you will find it a helpful reference.

Who is CTIL?

CTIL was established in 2012, but our origins date back to 2009 when Vodafone Group and Telefonica (O2) entered into an exclusive network sharing arrangements in the UK. The two companies worked closely together on a project called Cornerstone and, to enhance their collaboration, they then created a joint venture company called Cornerstone Telecommunications Infrastructure Ltd (CTIL) to create and manage a single grid network of cell sites in the UK.

One physical grid, running two competing networks, means greater efficiency, broader coverage and, crucially, better competition for the customer. Today, CTIL is also responsible for building the new sites needed to improve capacity in areas with many customers, and extending coverage into rural and remote areas. We're proud to be delivering real benefits to today's mobile phone users.

Overall CTIL looks after more than 17,000 active telecoms sites and that number continues to rise as Vodafone and O2 continue to grow their network.

Vodafone and O2 continue to operate entirely independently as businesses, and compete in the market to retain and win customers.

How does the administration of the CTIL agreement work?

In November 2014, CTIL engaged Cluttons to administer the entire portfolio, and provide a consistent service to our landlords. You may have already received correspondence from Cluttons on our behalf, and going forward Cluttons' will be your first point of contact for any payment queries. Estates Service Desk contact numbers are **0800 133 7418** or **07002 000005**.

CTIL is committed to working with you and developing excellent relationships with all our landlords going forward. That relationship is critically important to us and both CTIL and Cluttons have a team of experienced and professional people who are dedicated to managing our occupation and that relationship with you.

2

SERVICES

CTIL CELL SITE REFERENCE (CS reference)

To keep track of our sites, each one has a unique cell site reference code which is most commonly known as a 'CS reference' but sometimes gets referred to as a 'site number', 'site ID' or 'property reference'. To allow us to deal with your query quickly when you contact us, please quote this unique cell site reference (CS reference) – along with your CTIL site name.

CLUTTONS LLP

CTIL has partnered with Cluttons to provide an agreement administration service. This means that you will receive correspondence and payment direct from Cluttons.

HOW RENT IS PAID

It is likely that your first rent payment will have been made via your solicitor at legal completion. If for any reason you haven't received this initial payment, please contact your solicitor. Ongoing rent payments will be made by our Cluttons Accounts Payable team – usually via BACS (electronic transfer) – directly into your bank account on the agreed due date.

If you don't already have your rent paid by BACS and you would like to, or if you wish to change the bank account into which your rent is paid, please notify the Cluttons Estates team the following information in writing:

- Payee Name
- Account Number
- Account sort code
- Bank name

INVOICES AND VAT

CTIL will pay the rent due at the agreed calendar intervals stated in our agreement.

- If you have elected to charge VAT on your rental income, CTIL will need a valid VAT invoice for each amount due.
- If you have elected NOT to charge VAT on your rental income, VAT will not be payable by CTIL, and we do not require a VAT invoice from you.

All invoices for payment should be sent to:

- **estatepayments@ctil.co.uk**, or
- **CTIL Estates, c/o Cluttons LLP, 2nd Floor, Atlantic House, Imperial Way, Reading, Berkshire RG2 0TD**

As with all correspondence, please quote the CTIL CS reference

3

SITE

HEALTH AND SAFETY GUIDELINES AND REGULATIONS

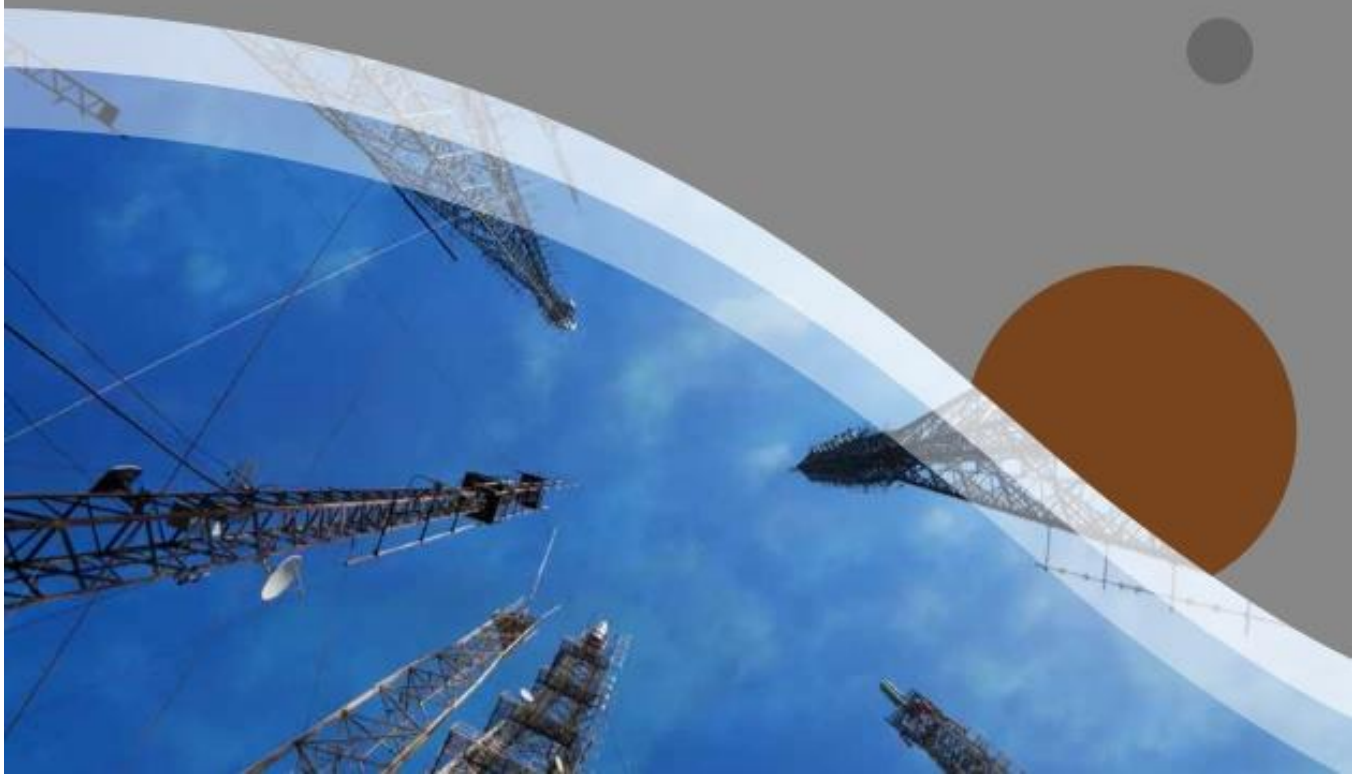
Various guidelines and regulations apply to the operation of radio base stations, and many of them serve to protect health and safety.

Specifically, the telecommunications industry in the UK ensures that the transmissions from our antennas comply with The Electromagnetic Fields Directive and the International Commission on Non-Ionising Radiation (ICNIRP) Guidelines for occupational and public exposure.

The Electromagnetic Fields Directive was adopted by the European Union in June 2013 and will be transposed into UK law by 1 July 2016 as The Control of Electromagnetic Fields at Work Regulations 2016. This legislation will legally formalise the limits to which workers may be exposed to non-ionizing radiation for the first time. The regulations will place a duty on employers to ensure their workers are not exposed to levels in excess of the permitted levels. Vodafone and Telefonica have been designing and operating their sites to be compliant to these levels since 2001. Signage and barriers have been erected to ensure that there is no inadvertent opportunity for workers to enter into an area where exposures will exceed the permitted levels. The regulations make it essential that the operators are contacted if personnel need to work in close proximity to the antennas and that all personnel obey site signage at all times. Details of who to contact if personnel need to work close to an antenna are provided below.

In general, medical devices are designed so that they are protected against interference from radio waves. Anyone who wears a medical device should contact their doctor or the supplier before they access the roof, other areas of the building or structure to which antennas are attached, to ensure that this is the case.

All Vodafone and O2 installations are designed to comply with the precautionary ICNIRP exposure guidelines as adopted in a European Union recommendation, and the UK Government and Public Health England support this view. Below these guideline levels there is no evidence of adverse health effects.



4

APPENDIX

SITE - SIGNAGE

This section gives you information about the typical signage that is used on your site.

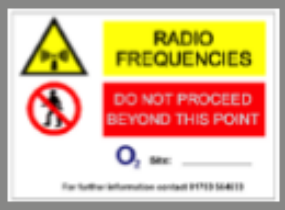
The signs specified below have been agreed between the UK mobile operators in conjunction with the Health and Safety Executive. Some, or all of them, are deployed at all cell sites.

Site entry sign

This sign is designed to inform visitors of:

Site ID No. and Operator:

- What form or type of hazard exists on the site that they could be exposed to;
- What actions they need to take to avoid or minimise such exposure;
- Who operates the equipment that is producing the hazard;
- How to contact the site operators present on site.



Boundary sign:

This sign will be placed at the boundary of any non-compliance area.

It is designed to give a clear warning of the nature of the hazard, and details of the owner of the equipment.

Antenna sign

The majaority of people are unable to recognise an antenna. Therefore, this sign will be placed on the antenna itself.

Additional Signage

Often, additional signage may be displayed for shared antennas, such as the example here. Please ensure that the instructions are followed carefully and that both operators are contacted should the need arise.

Who needs this information?
You should bring this information to the attention of anyone who plans to work in the vicinity of the antennas. This includes your employees, contractors and sub-contractors. It also includes anyone else who might have the right to access the roof, or other areas of the building or structure to which antennas are attached. It includes occupiers of the building or site and their employees, contractors and sub-contractors as well.

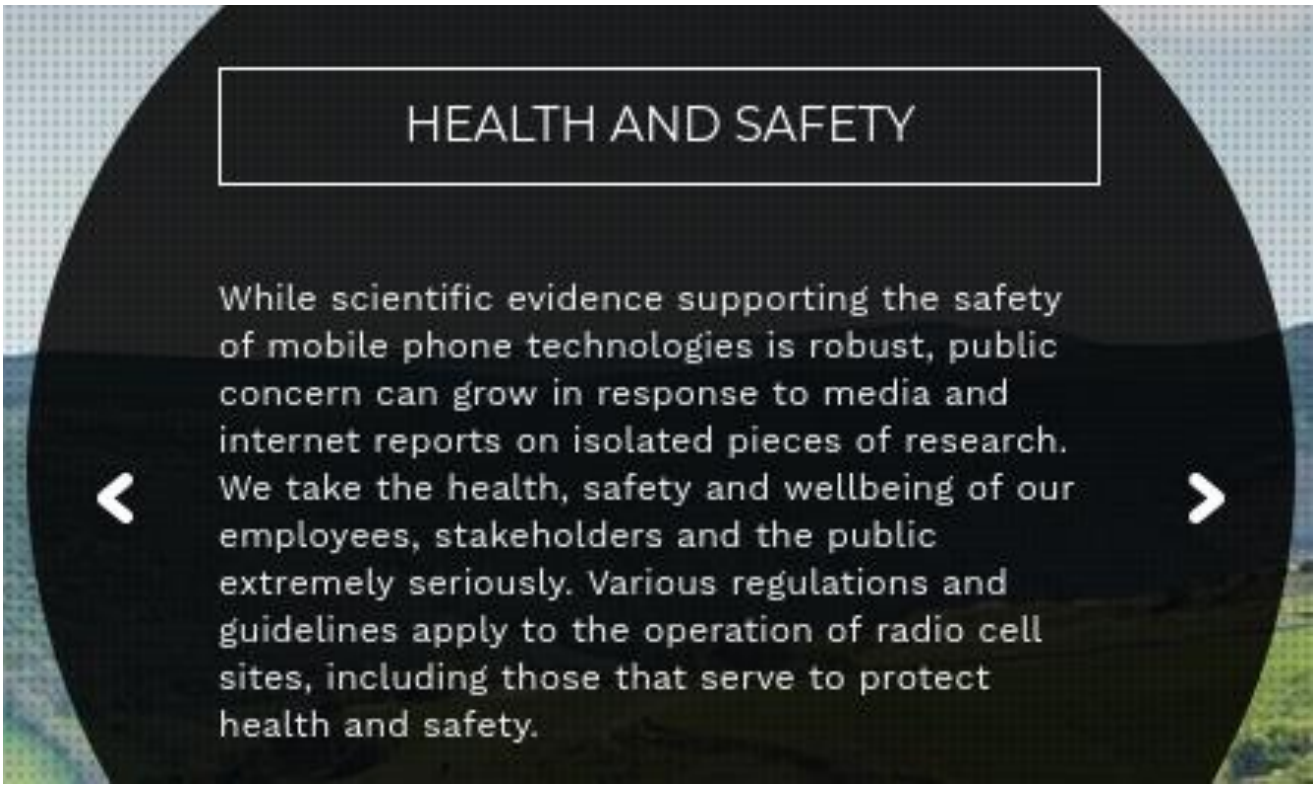
CTIL basically pay rent to private land owners in order for erect their base and cell/mobile towers around the United Kingdom. CTIL have "Code Powers" – a statutory notification under section 107(6) of the communications act 2003 appointed to them via "Ofcom".

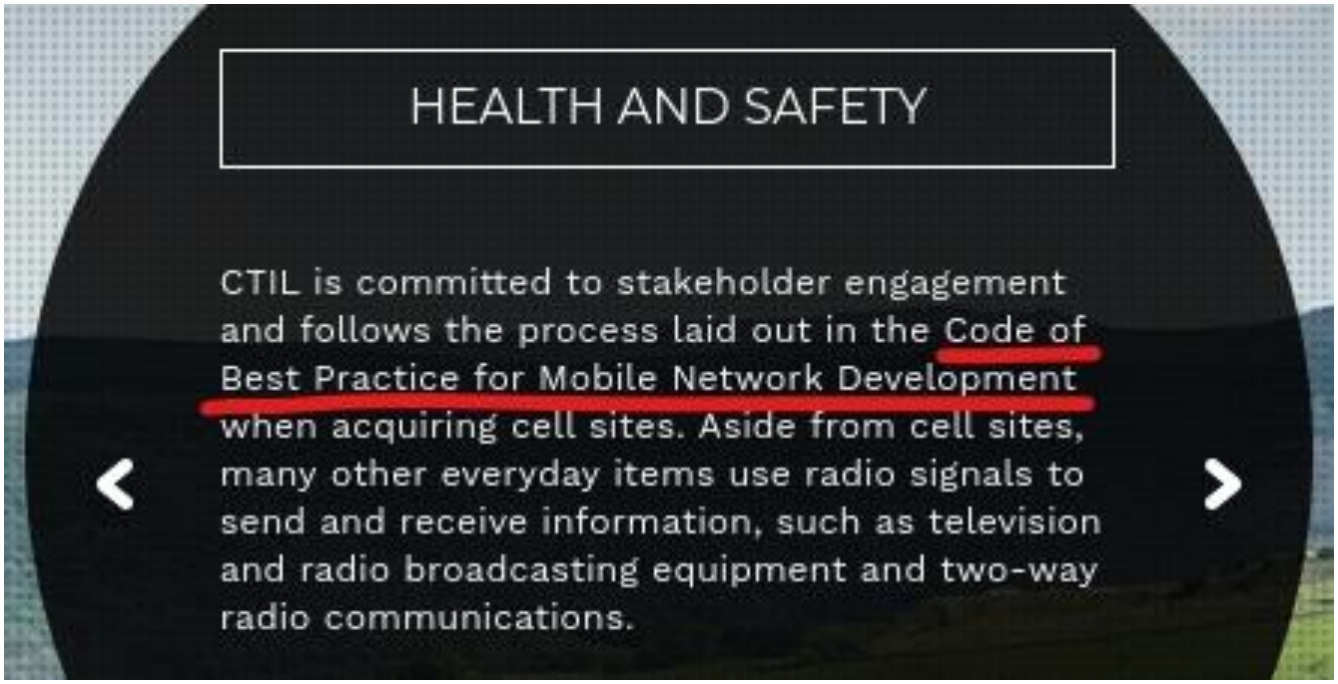
If an agreement cannot be made between the private land owner and CTIL then CTIL have the power to apply to the crown court to obtain rights to execute work on said piece of land.

"Code Powers" also give CTIL the power to construct infrastructure (mobile EMF towers) on public land without needing to obtain a specific license and benefit from certain "Immunities" from the town and country planning legislation.

Landlords are allowing CTIL to erect mobile phone towers on their private land because they see it as "free money". They don't understand the serious health risks from the radiation that these towers produce.

CTIL AND HEALTH AND SAFETY


HEALTH AND SAFETY
While scientific evidence supporting the safety of mobile phone technologies is robust, public concern can grow in response to media and internet reports on isolated pieces of research. We take the health, safety and wellbeing of our employees, stakeholders and the public extremely seriously. Various regulations and guidelines apply to the operation of radio cell sites, including those that serve to protect health and safety.


HEALTH AND SAFETY
CTIL is committed to stakeholder engagement and follows the process laid out in the Code of Best Practice for Mobile Network Development when acquiring cell sites. Aside from cell sites, many other everyday items use radio signals to send and receive information, such as television and radio broadcasting equipment and two-way radio communications.

WHAT THE "CODE OF BEST PRACTICE" SAYS ABOUT ELECTRO MAGNETIC FIELDS

Electromagnetic fields

What are EMFs?

An EMF is produced whenever a piece of electrical or electronic equipment (i.e. TV, food mixer, computer mobile phone etc.) is used.

EMFs are static electric, static magnetic and time-varying electric, magnetic and electromagnetic (radio wave) fields with frequencies up to 300 GHz.

EMFs are present in virtually all workplaces and if they are of high enough intensity, an employer may need to take action to ensure employees are protected from any adverse effects.

What are their effects?

Exposure to high levels of EMFs can give rise to effects that may be irritating or unpleasant.

The effects that occur depend on the frequency range and intensity of the EMFs to which an employee is exposed.

Low frequency and high frequency EMFs affect the human body in different ways. However between frequencies of 100 kHz and 10 MHz both effects may occur.

In reality, these effects are extremely rare and will not occur in most day-to-day work situations. In the UK, within those sectors with significant exposure to EMFs, notably the health care sector, energy distribution, engineering, broadcasting, transport and telecommunications, the risks are generally well understood and well-managed.

In recent years, many different countries have undertaken research, measuring and investigating EMF levels in the environment. There is currently no well-established scientific evidence of long-term effects

More information on the effects of EMF can be found in A guide to the Control of Electromagnetic Fields at Work Regulations 2016 (HSG 281).

The Control of Electromagnetic Fields at Work Regulations 2016

The Control of Electronic Fields at Work Regulations 2016 transpose the requirements of European Commission Directive 2013/35/EU. This Directive lays down the minimum requirements for the protection of employees from risks to their health and safety arising, or likely to arise, from exposure to electromagnetic fields.

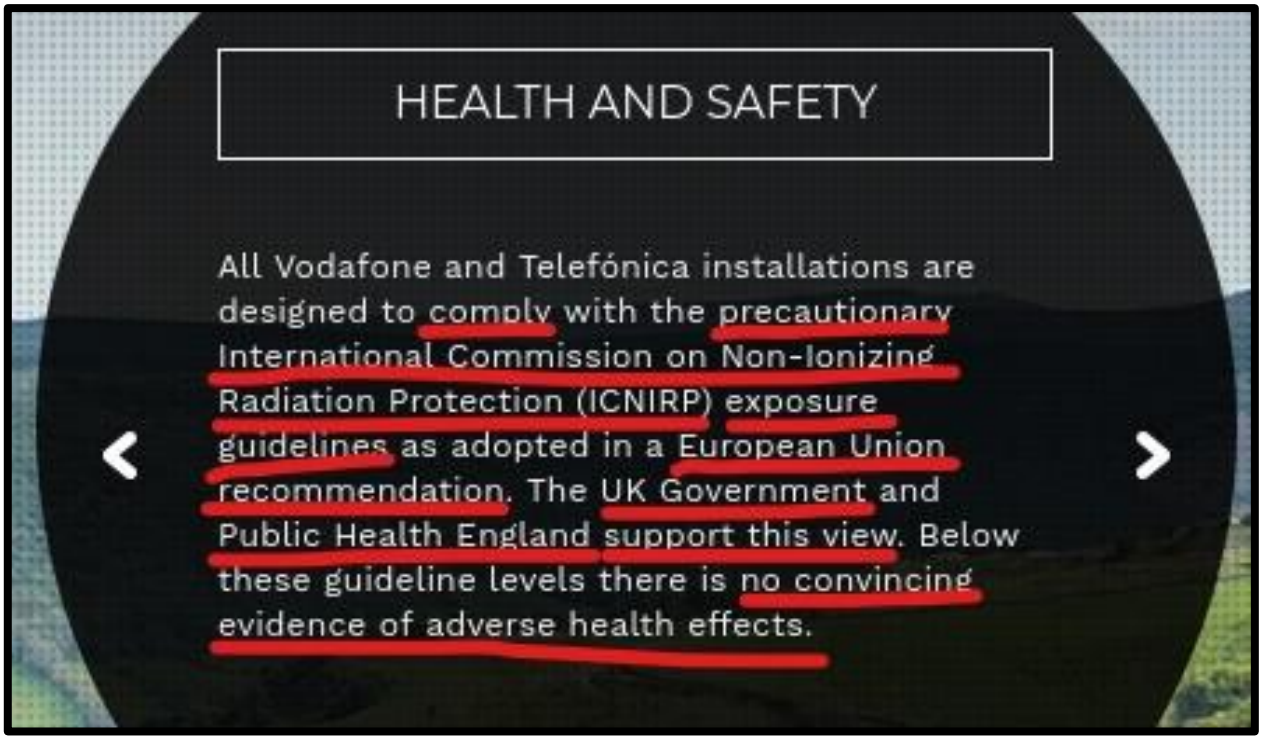
These Regulations, often abbreviated to CEMFAW Regulations place duties on employers to assess an employees' potential exposure to electromagnetic fields (EMFs) with reference to action levels (ALs) and exposure limit values (ELVs).

Employers as part of managing the health and safety of their business already need to control the risks in the workplace. This is a requirement under the Management of Health and Safety at Work Regulations 1999 (MHSW). Employers need to think about what might cause harm to people and take reasonable steps to prevent harm – this includes considering any risks arising from exposure to EMFs.

The majority of employers will not need to take any additional action to reduce the risk from EMF. This is because either:

- the levels of EMF in most workplaces are already at safe levels, and/or;
- in workplaces where employees may be exposed to higher levels of EMFs, the levels and associated risks will already have been assessed and managed

- More information on the CEMFAW Regulations and what an employer's responsibilities are.

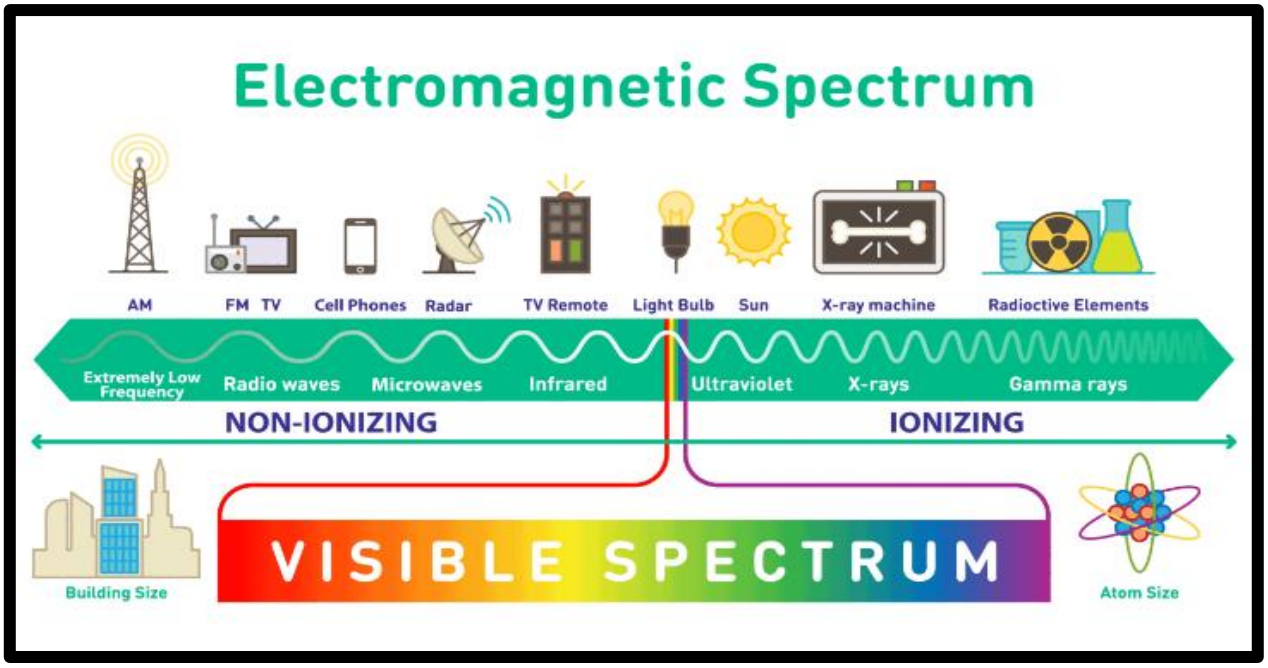

HEALTH AND SAFETY
All Vodafone and Telefónica installations are designed to comply with the precautionary International Commission on Non-Ionizing Radiation Protection (ICNIRP) exposure guidelines as adopted in a European Union recommendation. The UK Government and Public Health England support this view. Below these guideline levels there is no convincing evidence of adverse health effects.

ICNIRP (INTNERNATIONL COMMISSION ON NON-IONIZING RADIATION PROTECTION)

ICNIRP is a private organisation that is responsible for testing the health effects of non-ionizing radiation and electromagnetic fields on humans.

The Telecommunications industry worldwide relies heavily on the findings ICNIRP publishes in order to stay compliant with up to date legislation.

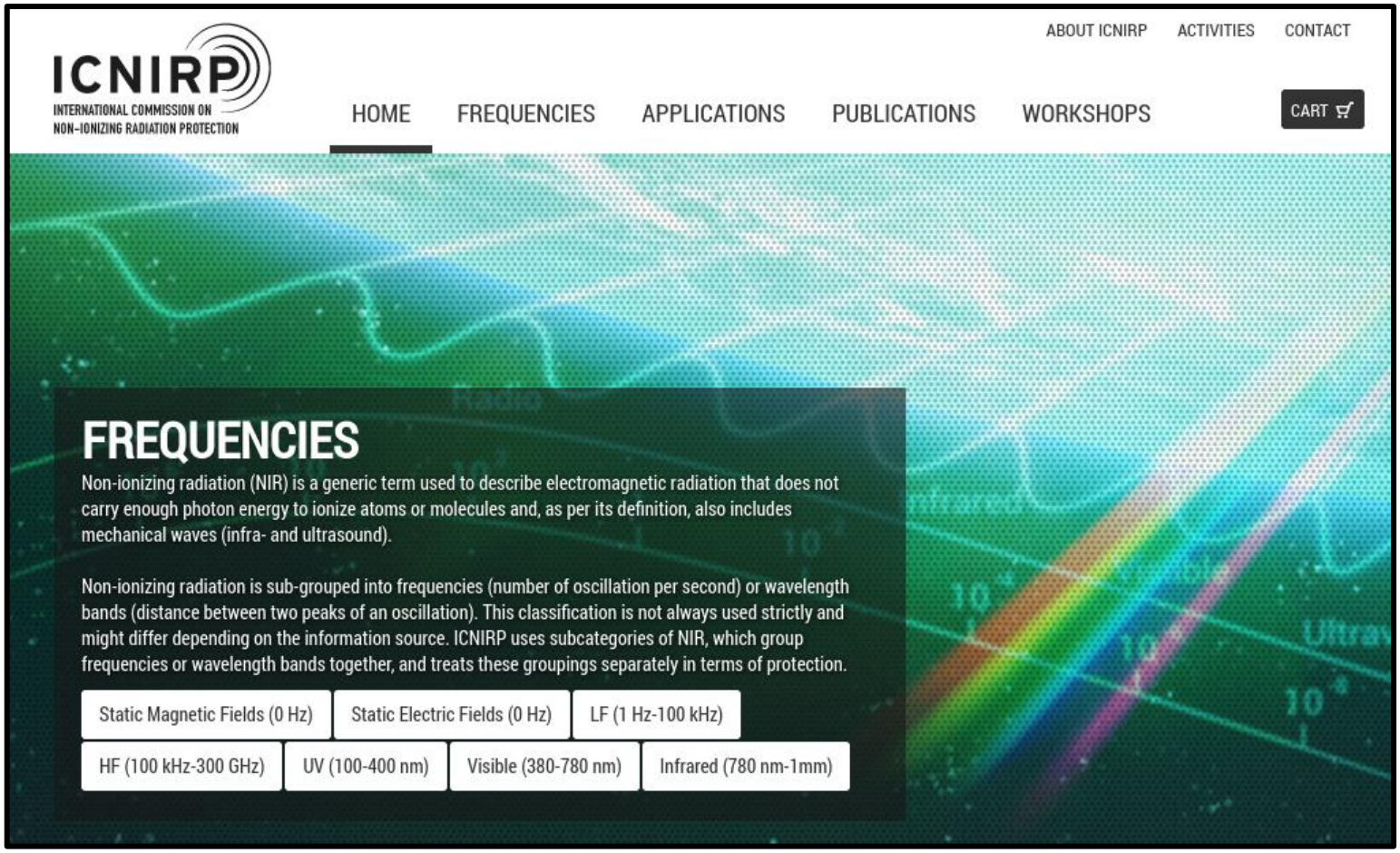
I am now going to prove to you that the supposed guidelines ICNIRP sets is nothing more than bogus, fraudulent voluminous bullshit.



Remember this chart from earlier? As discussed, the electromagnetic field spectrum is split into two forms of radiation. IONIZING and NON-IONIZING.

IONIZING RADIATION is scientifically proven to be extremely hazardous to humans, carcinogenic and destroys DNA.

NON-IONIZING RADIATION is just as bad but the safety studies are purposely manipulated and written in such a way to make the reader think NON-IONIZING RADIATION is safe. This is not true as I am about to show you. Remember 5G works using microwaves which is NON-IONIZING RADIATION.


ICNIRP
INTERNATIONAL COMMISSION ON NON-IONIZING RADIATION PROTECTION
ABOUT ICNIRP
ACTIVITIES
CONTACT
HOME
FREQUENCIES
APPLICATIONS
PUBLICATIONS
WORKSHOPS
CART
FREQUENCIES
Non-ionizing radiation (NIR) is a generic term used to describe electromagnetic radiation that does not carry enough photon energy to ionize atoms or molecules and, as per its definition, also includes mechanical waves (infra- and ultrasound).
Non-ionizing radiation is sub-grouped into frequencies (number of oscillation per second) or wavelength bands (distance between two peaks of an oscillation). This classification is not always used strictly and might differ depending on the information source. ICNIRP uses subcategories of NIR, which group frequencies or wavelength bands together, and treats these groupings separately in terms of protection.
Static Magnetic Fields (0 Hz)
Static Electric Fields (0 Hz)
LF (1 Hz-100 kHz)
HF (100 kHz-300 GHz)
UV (100-400 nm)
Visible (380-780 nm)
Infrared (780 nm-1mm)

FREQUENCY CATEGORIES ON ICNIRP WEBSITE

- **Static Magnetic and Electrical Fields (0Hz)**
- **Low Frequency - LF (1Hz – 100KHz)**
- **High Frequency – HF (100kHz – 300GHz)**
- **UV (100 – 400nm)**
- **Visible (380 – 780nm)**
- **Infrared (780 nm-1mm)**

FREQUENCY BANDS EXPLAINED

1 TO 1000HZ – THERE ARE 1000HZ IN 1KHZ

1 to 1000KHZ – THERE ARE 1000KHZ IN 1MHZ

1 TO 1000MHZ – THERE ARE 1000MHZ IN 1GHZ

1 TO 1000GHZ – THERE ARE 1000GHZ IN A THZ

ICNIRP
INTERNATIONAL COMMISSION ON NON-IONIZING RADIATION PROTECTION
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ICNIRP
As an independent organization, the International Commission on Non-Ionizing Radiation Protection (ICNIRP) provides scientific advice and guidance on the health and environmental effects of non-ionizing radiation (NIR) to protect people and the environment from detrimental NIR exposure.
NIR refers to electromagnetic radiation such as ultraviolet, light, infrared, and radiowaves, and mechanical waves such as infra- and ultrasound. In daily life, common sources of NIR include the sun, household electrical appliances, mobile phones, Wi-Fi, and microwave ovens.
READ MORE

The International Commission on Non-Ionizing Radiation Protection (ICNIRP) provides scientific advice and guidance on the health and environmental effects of non-ionizing radiation (NIR) to protect people and the environment from detrimental NIR exposure.

Non-ionizing radiation refers to electromagnetic radiation such as ultraviolet, light, infrared, and radiowaves, and mechanical waves such as infra- and ultrasound. In daily life, common sources of NIR include the sun, household electrical appliances, mobile phones, Wi-Fi, and microwave ovens.

Within the electromagnetic spectrum, NIR is situated below the ionizing radiation band that includes x-rays. NIR has less energy than ionizing radiation and cannot remove electrons from atoms, i.e. NIR can not ionize (except for part of the UV band). NIR is sub-grouped into different frequency or wavelength bands. The different subgroups have different effects on the body and require different protection measures.

ICNIRP gives recommendations on limiting exposure for the frequencies in the different NIR subgroups. It develops and publishes Guidelines, Statements, and reviews used by regional, national, and international radiation protection bodies, such as the World Health Organization. ICNIRP is a main contributor to the international scientific NIR dialogue and the advancement of NIR protection.

ICNIRP is independent from commercial, national and vested interests. ICNIRP's members do not represent their country of origin nor their institute. They cannot hold a position of employment or have other interests that compromise their scientific independence. ICNIRP does not receive money from industry, its funding stems from subsidies granted by national and international public institutions. For more information on fundings and governance, read here.

LOW FREQUENCY EFFECTS ON BODY AND HEALTH IMPLICATIONS

LF effects on the body and health implications

When people are exposed to LF fields, electric fields and currents are generated inside the body and they can interfere with the body's own electric fields and current flows related to normal biological functioning. In addition, the LF electric field interacts with the surface charge of the body. At low levels, these interactions go mostly unnoticed, and do not compromise health.

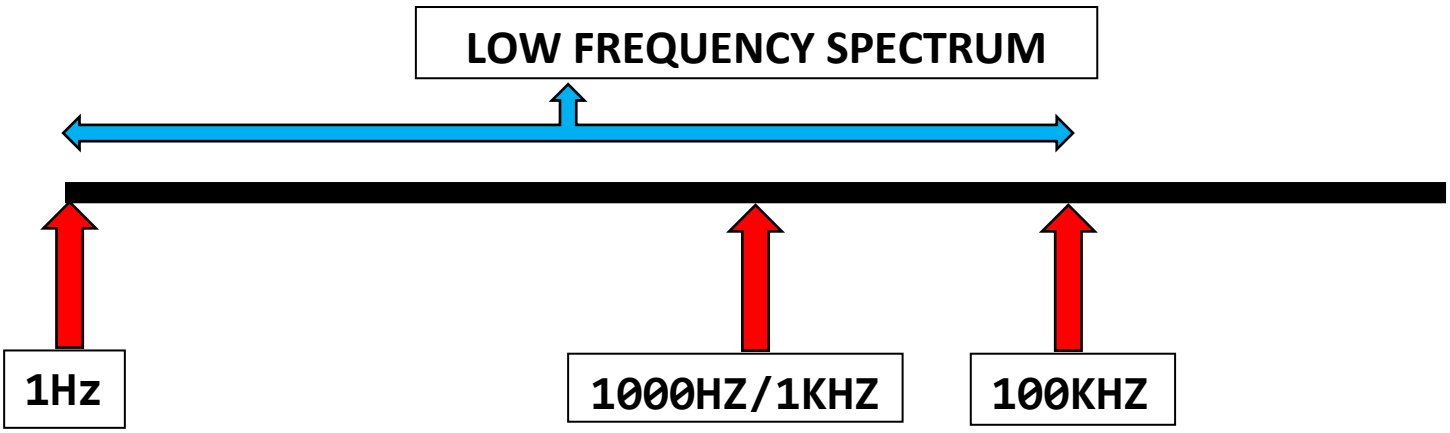
However, above a certain level of exposure, referred to as threshold, the induced internal fields provoke reversible effects on excitable cells in the body such as a faint light flickering in the periphery of the visual field (phosphenes); electric charge effects on the skin (similar to what is experienced when you comb your hair, causing your hair to rise); or a stimulation of nerves and muscles experienced as a tingling sensation. These effects occur at different thresholds depending on the frequency of the field. At higher levels, LF causes irreversible cardio-vascular effects or tissue burns.

Potential health effects associated with long-term low-level exposure have been extensively studied over the last few decades.

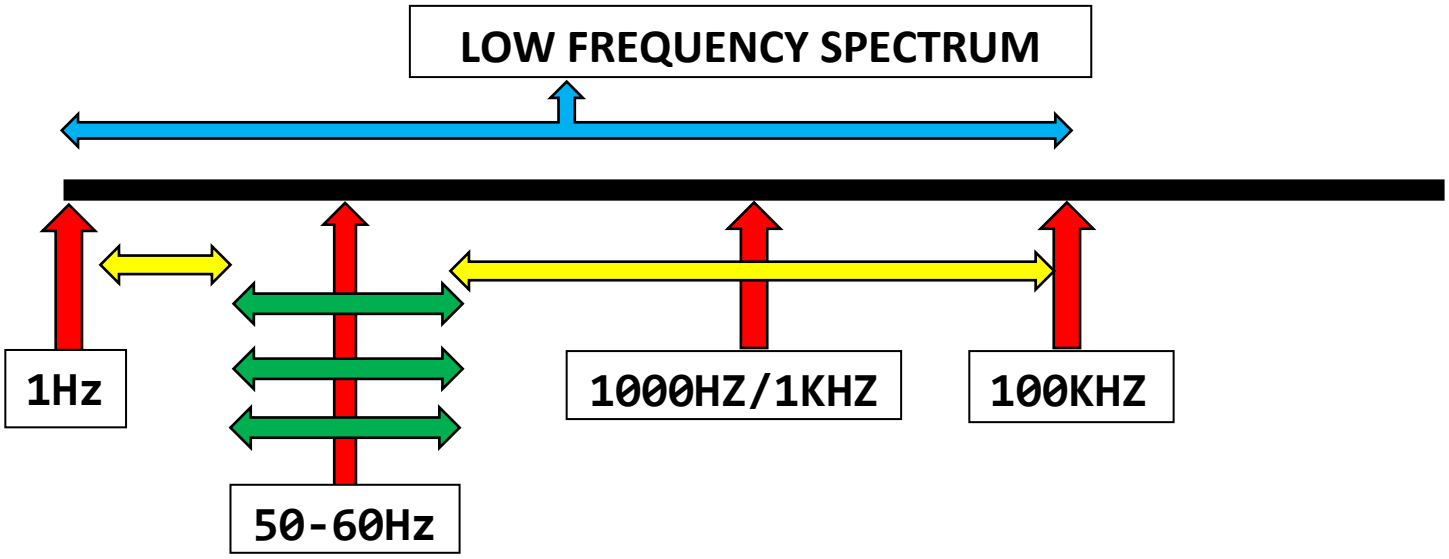
Epidemiological studies have suggested that long-term low-level exposure to 50-60 Hz magnetic fields might be associated with an increased risk of childhood leukemia. However, a combination of selection bias, some degree of confounding and chance could possibly explain these results. In addition, no biophysical mechanism has been identified and results from animal and cellular laboratory studies do not support the notion that exposure to 50-60 Hz magnetic fields is a cause of childhood leukemia. Therefore, the currently existing scientific evidence does not lead to the conclusion that a prolonged exposure to LF is a cause of childhood leukemia. Evidence for cancer in adults from LF exposure is very weak. There is no substantial scientific evidence for an association between LF exposure and Parkinson's disease, multiple sclerosis, developmental and reproductive effects, and cardiovascular diseases, while for Alzheimer´s disease and amyotrophic lateral sclerosis the evidence is inconclusive. Studies of symptoms, sleep quality, cognitive function have not provided consistent evidence of an effect from this type of exposure.

Overall research has not shown to date that long-term low-level LF exposure has detrimental effects on health.

ICNIRP states that the low frequency spectrum is between 1Hz and 100Khz.



But the supposed safety studies have only been tested between 50hz 60hz. There are no studies between 1Hz-50Hz and 50Hz – 100Khz.



How can they set guidelines and say the entire low frequency spectrum has been safety tested when their only doing isolated pieces of research between 50-60Hz? They should be testing the entire low frequency spectrum and not just a small percentage of it.

They are then setting guidelines that governments and telecommunication organisations all over the world are following saying that low frequency safety tests have been carried out and non-ionizing radiation at this level are safe.

THIS IS BLATANTLY A LIE!

HIGH FREQUENCY EFFECTS ON BODY AND HEALTH IMPLICATIONS

HIGH FREQUENCY

100 kHz - 300 GHz

Frequency range and use

High Frequency (HF) is the term used to describe that part of the electromagnetic spectrum comprising the frequency range from 100 kHz to 300 GHz. At high frequency, the electric and the magnetic fields, which together make up the electromagnetic field, are interrelated and considered jointly for measurements. HF field exposure is usually measured in watts per square meter (W/m^2).

HF fields are used in a variety of technologies, most widely for communication purposes (e.g. mobile phones, base stations, Wi-Fi, radio, TV, security devices), and also in medicine (e.g. Magnetic Resonance Imaging (MRI) equipment) and for heating purposes (e.g. microwave ovens).

HF effects on the body and health implications

The critical effect of HF exposure relevant to human health and safety is heating of exposed tissue. HF fields can penetrate into the body (the higher the frequency, the lower the penetration depth) and cause vibration of charged or polar molecules inside. This results in friction and thus heat.

The body can accommodate a small increase in heat, in a similar way that excess body heat is dissipated when performing sporting activity. This is because the human body has a strong ability to regulate its internal temperature. However, above a certain level (referred to as the threshold) depending on the duration of exposure, HF exposure and the accompanying temperature rise can provoke serious health effects, such as heatstroke and tissue damage (burns).

Acute and long-term effects of HF exposure below the thermal threshold have been studied extensively without showing any conclusive evidence of adverse health effects.

A considerable amount of research has been conducted on the relationship between HF fields and health outcomes such as headaches, concentration difficulty, sleep quality, cognitive function, cardiovascular effects, etc. This research to date has not shown any such health effects. The only consistently observed finding is a small effect on brain activity measured by electroencephalography (EEG). The biological implication of these small changes is, however, unclear. For example, they have not been shown to affect sleep quality or be associated with any other adverse effects.

Extensive research has been undertaken in relation to exposure to HF fields used specifically in mobile telephony. Among all of this research, the risk of tumors in close proximity to the ear where the phone is held, e.g. brain tumors, has been the focus of numerous epidemiological studies. A few of these epidemiological studies have reported a slight statistical increase in risk of some brain tumours for the small group of long-term and heavy mobile phone users (read more). Reporting biases and weaknesses of the studies may explain the observed findings. Several studies have not reported any increase in brain tumors with mobile phone use. Also, experimental studies on animals and cells have failed to confirm the findings of the epidemiological studies, and there is no biophysical mechanism that could explain carcinogenicity at such low exposure levels. In addition, the increased risk observed in some of the epidemiological studies is inconsistent with the stable frequency of occurrence of these cancers in the population. That is an important consideration, given the widespread and significant increase in the use of mobile phones in the general population during the last few decades.

The overall evaluation of all the research on HF fields leads to the conclusion that HF exposure below the thermal threshold is unlikely to be associated with adverse health effects.

Protection

To avoid hazards to health and prevent adverse interaction with high frequency fields (i.e. to prevent whole-body heat stress and excessive localized heating), ICNIRP recommends limiting the exposure to HF so that the threshold at which these interactions become detrimental is never reached. The exposure limits, called basic restrictions, are set in relation to the threshold known to show adverse effects, with an additional reduction factor to take care of scientific uncertainties pertaining to the determination of the threshold. The basic restrictions are generally expressed in terms of the specific absorption rate (SAR). Distinct SAR values are recommended for sources operated close to the body and those operating at a remote distance. Exposure levels outside the body, called reference levels, are derived from the basic restrictions for whole-body exposure using worst-case assumptions, in such a way that remaining below the reference levels (in air) implies that the basic restrictions will also be met (in the body).

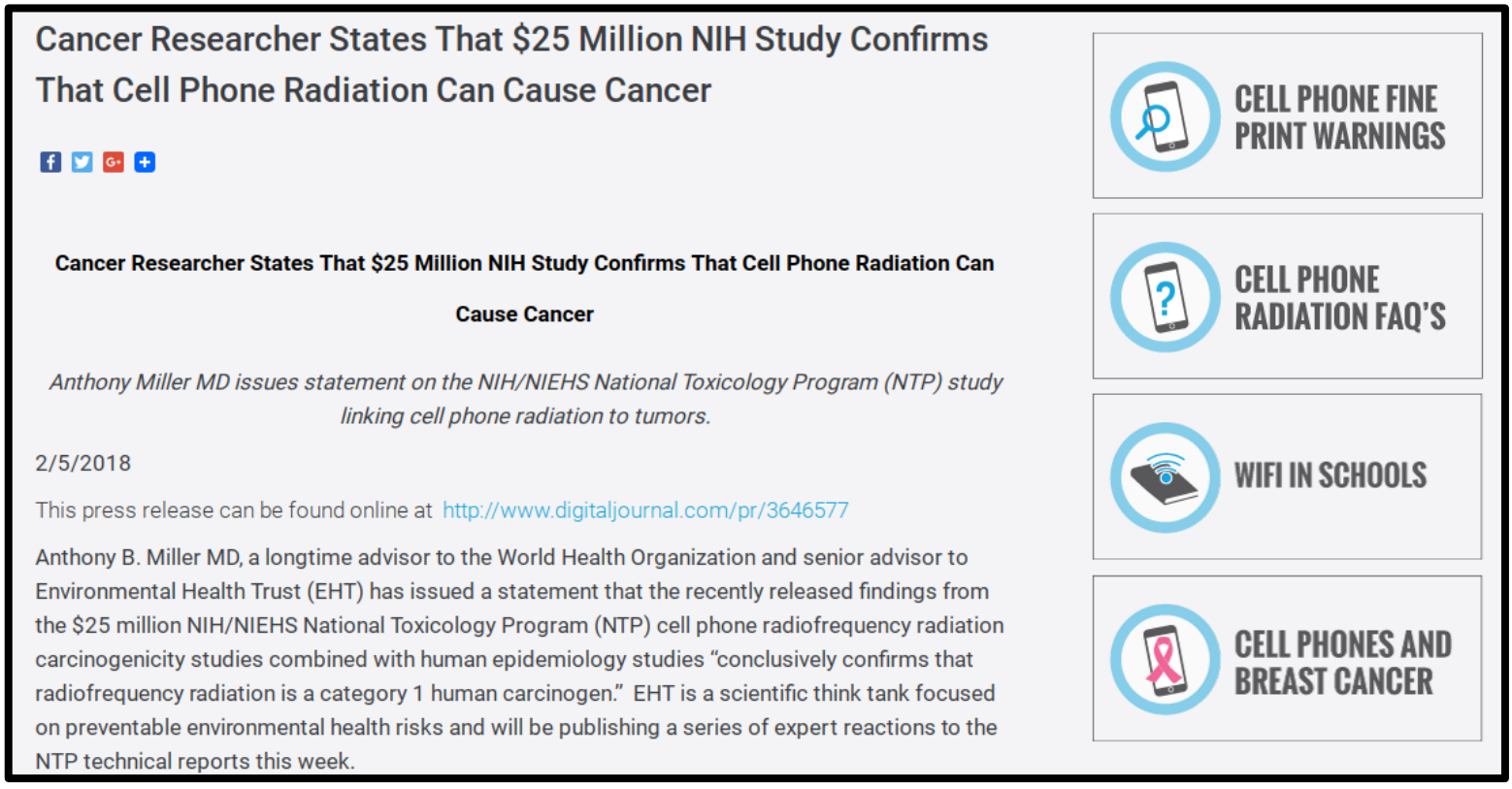
They clearly say HF are most commonly used in mobile phones, base stations, Wi-Fi, radio and TV. When it comes health effects, it only mentions "Thermal Effects". They only focus their findings on heat related symptoms and ignore the other serious health implications from exposure to High Frequencies.

They say things like *"a considerable amount of research has been conducted on the relationship between HF and health outcomes such as headaches, concentration, difficulty sleeping, cognitive function and cardio vascular effects. This research to date has not shown any such health effects."*

There are thousands of published documents from non-industry scientists proving that EMF exposure at HF has serious biological effects, cancerous effects, neurological effects and causes reproductive harm. Only focusing on thermal effects and ignoring all other associated health risks is very misleading to public and is again, isolated pieces of research.

They say *"several studies have not reported any increase in brain tumours with mobile phone use"*. What studies are they talking about? Their own industry studies perhaps? There are plenty non-industry studies which have proved that mobile phone use causes brain tumours and cancer.

Like this one.



Cancer Researcher States That $25 Million NIH Study Confirms That Cell Phone Radiation Can Cause Cancer

Cancer Researcher States That $25 Million NIH Study Confirms That Cell Phone Radiation Can Cause Cancer

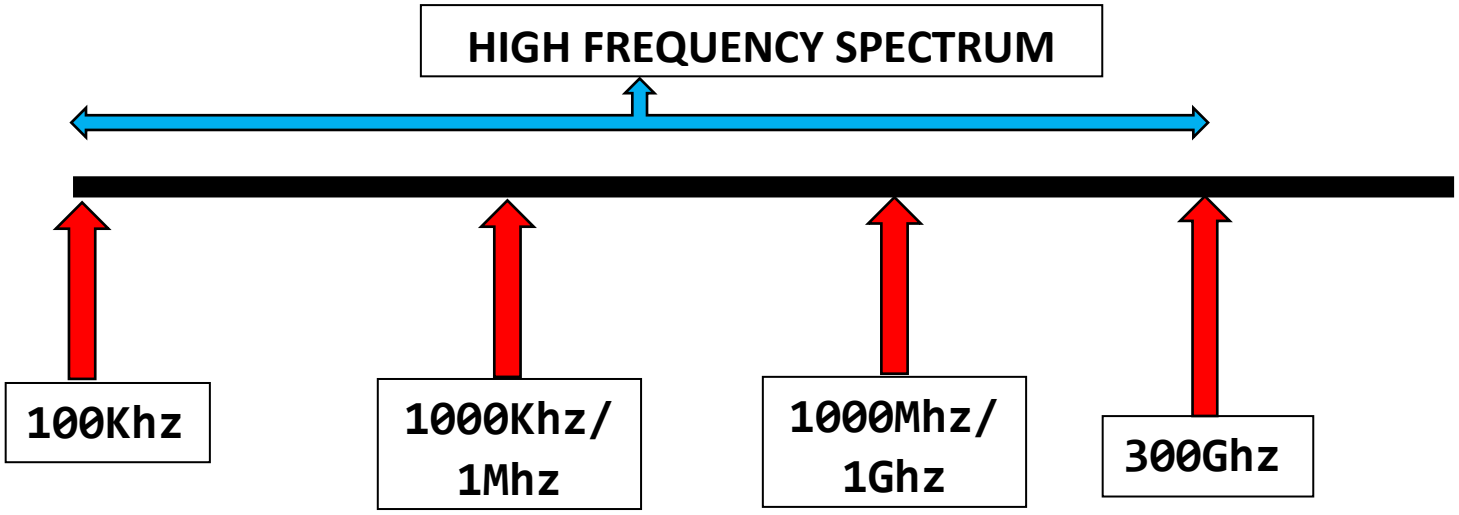
Anthony Miller MD issues statement on the NIH/NIEHS National Toxicology Program (NTP) study linking cell phone radiation to tumors.

2/5/2018

This press release can be found online at http://www.digitaljournal.com/pr/3646577

Anthony B. Miller MD, a longtime advisor to the World Health Organization and senior advisor to Environmental Health Trust (EHT) has issued a statement that the recently released findings from the $25 million NIH/NIEHS National Toxicology Program (NTP) cell phone radiofrequency radiation carcinogenicity studies combined with human epidemiology studies "conclusively confirms that radiofrequency radiation is a category 1 human carcinogen." EHT is a scientific think tank focused on preventable environmental health risks and will be publishing a series of expert reactions to the NTP technical reports this week.

According to ICNIRP The High Frequency spectrum is 100Khz to 300Ghz.



They don't mention ANY FREQUENCY BAND WHATSOEVER where they have conducted any safety studies? They really haven't done any research or safety studies into High Frequencies at all.

All they do is talk about thermal effects, its bullshit. How can the telecommunication industries rely on ICNIRP to ensure the public these frequencies are safe when they are not even conducting any safety studies into the high frequencies at all?

BASE STATIONS

High Frequency

Characteristics of the application and its use

Base stations are required to enable mobile phone communication, including calls and data transfer. They consist of different electronic components and antennas and can be located on masts, on rooftops, or on the outside or inside of buildings. Base stations emit high frequency (HF) fields in the range from several hundred MHz to several GHz. The exact frequency bands used differ between technologies (GSM, UMTS, CDMA2000, 4G) and between countries.

HF fields allow the transport of large data volumes through vacuum and air, and to a certain extent through solid matter, at a very fast rate (up to the speed of light). Over large distances, the signals must be relayed by a communication network comprising base stations and often supported by a wired network.

The power of a base station varies (typically between 10 and 50 watts) depending on the area that needs to be covered and the number of calls processed. This is low compared to other transmitters such as radio and television, which usually work at power levels ranging from several kilowatts to several megawatts. In general, the field strength decreases very rapidly with distance from the source and can be calculated (as the inverse square of the distance). Personal exposure to HF fields from base stations is different to that from mobile phones. HF exposure from mobile phones is mostly limited in time and is largest in the head or in those parts of the body close to where the phone is held. By contrast, base stations are a source of continuous whole-body exposure. This exposure is less intense than from a mobile phone, but occurs whether a mobile phone is being used or not.

Assessments of personal exposure levels are most accurately achieved through onsite field measurements. Theoretical calculations are also common but are complicated by the many factors that influence the actual exposure such as the height, tilt and direction of antenna, absorption from trees and plants or reflections from buildings, as well as distance. Distance alone is not a reliable proxy for exposure from a base station.

HF effects on the body and health implications

High frequency fields have the ability to penetrate the human body (though the higher the frequency, the lower the depth of penetration), with the main effect of this being a rise in temperature in the exposed tissue. The human body can adjust to small temperature increases in the same way as it does when undertaking exercise and performing sporting activities. This is because the body can regulate its internal temperature. However, above a certain level (referred to as the threshold) depending on the duration, HF exposure and the accompanying temperature rise, can provoke serious health effects, such as heatstroke and tissue damage (burns).

A large number of studies have been undertaken on both acute and long-term effects from HF exposure typical of base stations. Research at these levels of exposure has provided no conclusive evidence of any related adverse health effects.

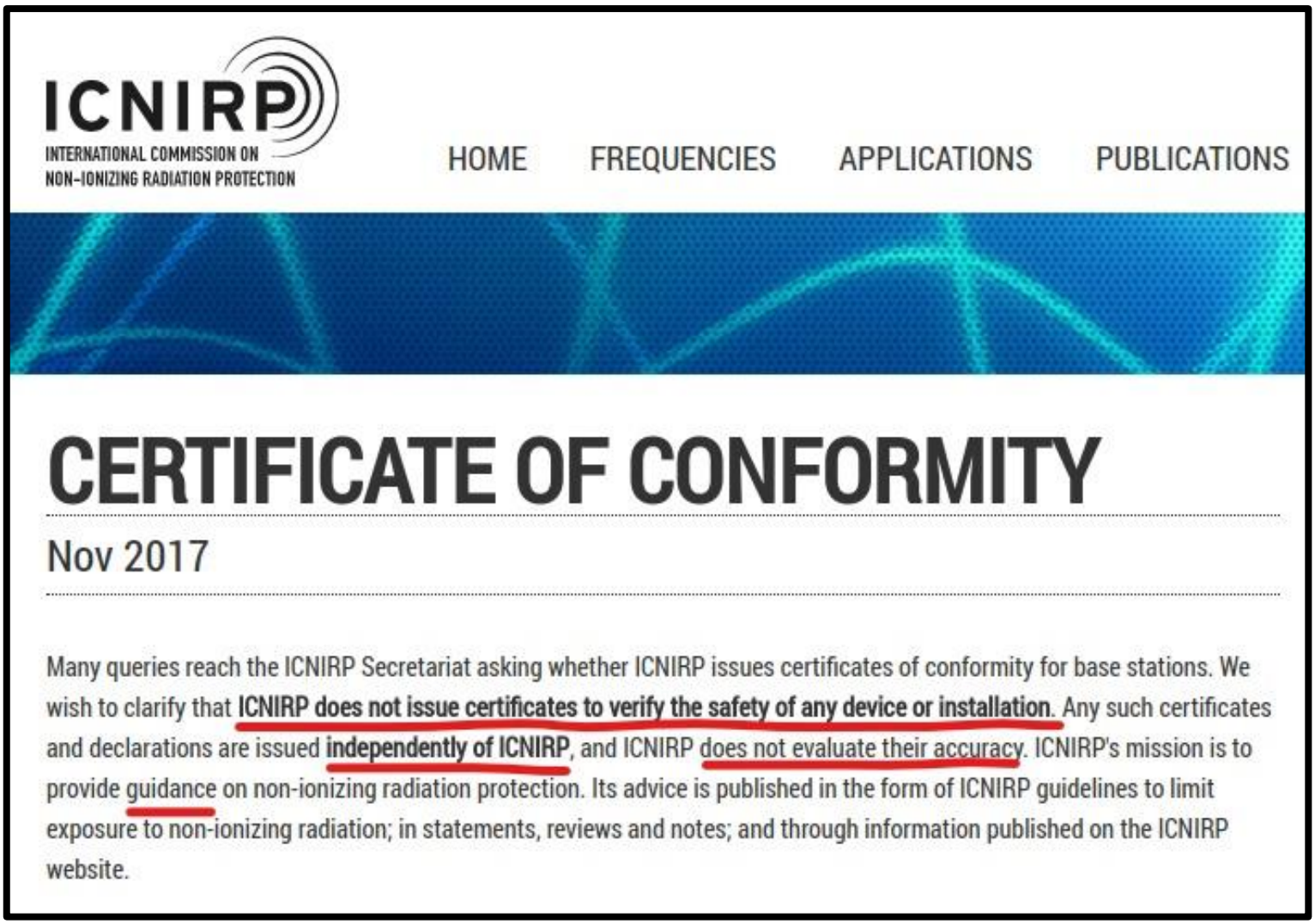
Protection

The ICNIRP guidelines give general recommendations regarding HF exposure. These provide limitations, expressed in terms of the Specific Absorption Rate (SAR), for the absorption of energy from HF fields. Distinct SAR values apply to whole-body exposure, which is typical from base stations, and for the head, which is relevant for exposures from mobile phones.

ICNIRP follows up the HF related scientific research and any new information relevant to health. A revision of the current ICNIRP guidelines on HF used in conjunction with base stations is underway.

Again, they are only talking about thermal effects from HF base station exposure which is not the only health implication. There are cancerous effects, neurological effects and reproductive problems that they are purposely not talking about or even mentioning.

Take a look at this DISCLAIMER that's available from their website.



ICNIRP
INTERNATIONAL COMMISSION ON NON-IONIZING RADIATION PROTECTION

HOME FREQUENCIES APPLICATIONS PUBLICATIONS

CERTIFICATE OF CONFORMITY

Nov 2017

Many queries reach the ICNIRP Secretariat asking whether ICNIRP issues certificates of conformity for base stations. We wish to clarify that **ICNIRP does not issue certificates to verify the safety of any device or installation**. Any such certificates and declarations are issued **independently of ICNIRP**, and ICNIRP does not evaluate their accuracy. ICNIRP's mission is to provide guidance on non-ionizing radiation protection. Its advice is published in the form of ICNIRP guidelines to limit exposure to non-ionizing radiation; in statements, reviews and notes; and through information published on the ICNIRP website.

"ICNIRP DOES NOT ISSURE CERTIFICATES TO VERIFY THE SAFETY OF ANY DEVICE OR INSTALLATION"

Type approval

From Wikipedia, the free encyclopedia

For Declaration of Conformity see Conformance mark

Type Approval or **Certificate of Conformity** is granted to a product that meets a minimum set of regulatory, technical and safety requirements. Generally, type approval is required before a product is allowed to be sold in a particular country, so the requirements for a given product will vary around the world. Processes and certifications known as *Type Approval* in English are generally called **Homologation**, or some cognate expression, in other European languages.

Compliance to type-approval requirements can be denoted by a third-party marking on the back of the product (e.g. ABS, TUV,UL, CSA), or by a Type-Approval certificate obtained by a manufacturer and kept on file. The CE mark found on the back of many electronic devices does not mean that the product has obtained Type Approval in the European Union. The CE mark is the manufacturer's declaration that the system/assembly meets the MINIMUM safety requirements of all the Directives (laws) applicable to it, and of itself, does not signify any Third Party involvement in the design or testing of a system/assembly. Many of the New Approach safety directives do not mandate third party involvement at all (e.g. LVD, EMD), and the ones that do (e.g. PED, MDD, ATEX) only require Notified Body (NoBo) involvement above a certain degree of risk category. When the risk category mandates this involvement, the CE Marking on the system/assembly will be followed by the NoBo number, which right to use is granted by the NoBo after the required design review, testing or auditing, as spelled out in the Conformity Assessment options of each Directive. See http://ec.europa.eu/enterprise/policies/single-market-goods/cemarking/about-ce-marking/index_en.htm. On the other hand, in China type approval is denoted by the CCC mark.

Type Approval is not a term confined to a particular industry. Type Approval requirements exist for products as diverse as marine equipment, mobile phones, automotive industry, or medical equipment. Type approval simply means that the product is certified to meet certain requirements for its *type*, whatever that may be.

"Type Approval or Certificate of Conformity is granted to a product that meets a minimum set of regulatory, technical and safety requirements. Generally, type approval is required before a product is allowed to be sold in a particular country."

So, as you can you see, a certificate of conformity is granted to a product (Mobile Phones, Base Stations, Mobile Towers) that meets a minimum set of regulatory, technical and safety requirements. ICNIRP in their own words *"ICNIRP DOES NOT ISSUE CERTIFICATES TO VERIFY THE SAFETY OF ANY DEVICE OR INSTALATION"*

EMF Radiation Warning!

How To Protect Yourself From This Invisible Toxic Killer

432Relax.com

ICNIRP GUIDELINES

REVISION OF THE HF GUIDELINES

Dec 2017

Munich, Germany, 7 December 2017

Note on the Revision of the High-Frequency Portion of the ICNIRP 1998 EMF Guidelines

ICNIRP's current guidelines for the high-frequency (100 kHz – 300 GHz) portion of the electromagnetic spectrum were published in 1998. Given the large body of relevant research that has been generated since those 1998 guidelines, ICNIRP is now revising the guidelines to incorporate this literature.

The revision of the guidelines has been underway since 2014, and a public consultation version of the updated guidelines is expected within the first half of 2018. Given this timing, ICNIRP has been asked whether, in the interim period, the current guidelines can still be considered as protective. This is a very reasonable question, particularly given that changes are anticipated in the revised guidelines.

As part of the revision process ICNIRP has considered in detail whether the 1998 guidelines remain protective for current exposure scenarios, where it was noted that the anticipated changes relate primarily to the improvement of transparency and consistency across the exposure limits and the addition of new limits to account for exposure situations associated with potential technological advances, and further that the anticipated exposure limit changes are very small compared to the large degree of precaution that was built into the 1998 guidelines. ICNIRP therefore concluded that the 1998 guidelines do remain protective. That is, the 1998 guidelines still provide protection against all known health effects of high-frequency radiation within the frequency range 100 kHz – 300 GHz. However, if ICNIRP should discover aspects of the 1998 guidelines that are not sufficiently protective during the remainder of the high-frequency guidelines revision process, ICNIRP will immediately publish interim amendments that would remain in force until the revised guidelines are published.

ICNIRP is keen to obtain feedback on the upcoming high frequency guidelines, and will seek this feedback via a public consultation process. It is anticipated that the public consultation document will be completed mid-2018, with the associated public consultation period beginning thereafter. Further updates on the high-frequency guidelines revision

INTERNATIONAL COMMISSION ON NON-IONIZING RADIATION PROTECTION

ICNIRP GUIDELINES

FOR LIMITING EXPOSURE TO TIME-VARYING ELECTRIC, MAGNETIC AND ELECTROMAGNETIC FIELDS (UP TO 300 GHz)

PUBLISHED IN: **HEALTH PHYSICS 74 (4):494-522; 1998**

Note: Equation 11 was subsequently amended by the ICNIRP Commission in the 1999 reference book. The amended version is added here at the end of the document.

ICNIRP PUBLICATION – 1998

GUIDELINES FOR LIMITING EXPOSURE TO TIME-VARYING ELECTRIC, MAGNETIC, AND ELECTROMAGNETIC FIELDS (UP TO 300 GHz)

International Commission on Non-Ionizing Radiation Protection*†

INTRODUCTION

In 1974, the International Radiation Protection Association (IRPA) formed a working group on non-ionizing radiation (NIR), which examined the problems arising in the field of protection against the various types of NIR. At the IRPA Congress in Paris in 1977, this working group became the International Non-Ionizing Radiation Committee (INIRC).

In cooperation with the Environmental Health Division of the World Health Organization (WHO), the IRPA/INIRC developed a number of health criteria documents on NIR as part of WHO's Environmental Health Criteria Programme, sponsored by the United Nations Environment Programme (UNEP). Each document includes an overview of the physical characteristics, measurement and instrumentation, sources, and applications of NIR, a thorough review of the literature on biological effects, and an evaluation of the health risks of exposure to NIR. These health criteria have provided the scientific database for the subsequent development of exposure limits and codes of practice relating to NIR.

At the Eighth International Congress of the IRPA (Montreal, 18–22 May 1992), a new, independent scientific organization—the International Commission on Non-Ionizing Radiation Protection (ICNIRP)—was established as a successor to the IRPA/INIRC. The functions of the Commission are to investigate the hazards that may be associated with the different forms of NIR, develop international guidelines on NIR exposure limits, and deal with all aspects of NIR protection.

Biological effects reported as resulting from exposure to static and extremely-low-frequency (ELF) electric and magnetic fields have been reviewed by UNEP/WHO/IRPA (1984, 1987). Those publications and a number of others, including UNEP/WHO/IRPA (1993) and Allen et al. (1991), provided the scientific rationale for these guidelines.

A glossary of terms appears in the Appendix.

PURPOSE AND SCOPE

The main objective of this publication is to establish guidelines for limiting EMF exposure that will provide protection against known adverse health effects. An adverse health effect causes detectable impairment of the health of the exposed individual or of his or her offspring; a biological effect, on the other hand, may or may not result in an adverse health effect.

Studies on both direct and indirect effects of EMF are described; direct effects result from direct interaction of fields with the body, indirect effects involve interactions with an object at a different electric potential from the body. Results of laboratory and epidemiological studies, basic exposure criteria, and reference levels for practical hazard assessment are discussed, and the guidelines presented apply to occupational and public exposure.

Guidelines on high-frequency and 50/60 Hz electromagnetic fields were issued by IRPA/INIRC in 1988 and 1990, respectively, but are superseded by the present guidelines which cover the entire frequency range of time-varying EMF (up to 300 GHz). Static magnetic fields are covered in the ICNIRP guidelines issued in 1994 (ICNIRP 1994).

In establishing exposure limits, the Commission recognizes the need to reconcile a number of differing expert opinions. The validity of scientific reports has to be considered, and extrapolations from animal experi-

* ICNIRP Secretariat, c/o Dipl.-Ing. Rüdiger Matthes, Bundesamt für Strahlenschutz, Institut für Strahlenhygiene, Ingolstädter Landstrasse 1, D-85764 Oberschleissheim, Germany.

† During the preparation of these guidelines, the composition of the Commission was as follows: A. Ahlbom (Sweden); U. Bergqvist (Sweden); J. H. Bernhardt, Chairman since May 1996 (Germany); J. P. Césarini (France); L. A. Court, until May 1996 (France); M. Grandolfo, Vice-Chairman until April 1996 (Italy); M. Hietanen, since May 1996 (Finland); A. F. McKinlay, Vice-Chairman since May 1996 (UK); M. H. Repacholi, Chairman until April 1996, Chairman emeritus since May 1996 (Australia); D. H. Sliney (USA); J. A. J. Stolwijk (USA); M. L. Swicord, until May 1996 (USA); L. D. Szabo (Hungary); M. Taki (Japan); T. S. Tenforde (USA); H. P. Jammet (Emeritus Member, deceased) (France); R. Matthes, Scientific Secretary (Germany).

During the preparation of this document, ICNIRP was supported by the following external experts: S. Allen (UK), J. Brix (Germany), S. Eggert (Germany), H. Garn (Austria), K. Jokela (Finland), H. Korniewicz (Poland), G.F. Mariutti (Italy), R. Saunders (UK), S. Tofani (Italy), P. Vecchia (Italy), E. Vogel (Germany). Many valuable comments provided by additional international experts are gratefully acknowledged.

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0017-9078/98/$3.00/0

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models, which have demonstrated neither teratogenic nor carcinogenic effects of exposure to athermal levels of high-frequency EMF.

Exposure to pulsed EMF of sufficient intensity leads to certain predictable effects such as the microwave hearing phenomenon and various behavioral responses. Epidemiological studies on exposed workers and the general public have provided limited information and failed to demonstrate any health effects. Reports of severe retinal damage have been challenged following unsuccessful attempts to replicate the findings.

A large number of studies of the biological effects of amplitude-modulated EMF, mostly conducted with low levels of exposure, have yielded both positive and negative results. Thorough analysis of these studies reveals that the effects of AM fields vary widely with the exposure parameters, the types of cells and tissues involved, and the biological end-points that are examined. In general, the effects of exposure of biological systems to athermal levels of amplitude-modulated EMF are small and very difficult to relate to potential health effects. There is no convincing evidence of frequency and power density windows of response to these fields.

Shocks and burns can be the adverse indirect effects of high-frequency EMF involving human contact with metallic objects in the field. At frequencies of 100 kHz–110 MHz (the upper limit of the FM broadcast band), the threshold levels of contact current that produce effects ranging from perception to severe pain do not vary significantly as a function of the field frequency. The threshold for perception ranges from 25 to 40 mA in individuals of different sizes, and that for pain from approximately 30 to 55 mA; above 50 mA there may be severe burns at the site of tissue contact with a metallic conductor in the field.

GUIDELINES FOR LIMITING EMF EXPOSURE

Occupational and general public exposure limitations

The occupationally exposed population consists of adults who are generally exposed under known conditions and are trained to be aware of potential risk and to take appropriate precautions. By contrast, the general public comprises individuals of all ages and of varying health status, and may include particularly susceptible groups or individuals. In many cases, members of the public are unaware of their exposure to EMF. Moreover, individual members of the public cannot reasonably be expected to take precautions to minimize or avoid exposure. It is these considerations that underlie the adoption of more stringent exposure restrictions for the public than for the occupationally exposed population.

Basic restrictions and reference levels

Restrictions on the effects of exposure are based on established health effects and are termed basic restrictions. Depending on frequency, the physical quantities used to specify the basic restrictions on exposure to EMF are current density, SAR, and power density. Protection against adverse health effects requires that these basic restrictions are not exceeded.

Reference levels of exposure are provided for comparison with measured values of physical quantities; compliance with all reference levels given in these guidelines will ensure compliance with basic restrictions. If measured values are higher than reference levels, it does not necessarily follow that the basic restrictions have been exceeded, but a more detailed analysis is necessary to assess compliance with the basic restrictions.

General statement on safety factors

There is insufficient information on the biological and health effects of EMF exposure of human populations and experimental animals to provide a rigorous basis for establishing safety factors over the whole frequency range and for all frequency modulations. In addition, some of the uncertainty regarding the appropriate safety factor derives from a lack of knowledge regarding the appropriate dosimetry (Repacholi 1998). The following general variables were considered in the development of safety factors for high-frequency fields:

- effects of EMF exposure under severe environmental conditions (high temperature, etc.) and/or high activity levels; and
- the potentially higher thermal sensitivity in certain population groups, such as the frail and/or elderly, infants and young children, and people with diseases or taking medications that compromise thermal tolerance.

The following additional factors were taken into account in deriving reference levels for high-frequency fields:

- differences in absorption of electromagnetic energy by individuals of different sizes and different orientations relative to the field; and
- reflection, focusing, and scattering of the incident field, which can result in enhanced localized absorption of high-frequency energy.

Basic restrictions

Different scientific bases were used in the development of basic exposure restrictions for various frequency ranges:

- Between 1 Hz and 10 MHz, basic restrictions are provided on current density to prevent effects on nervous system functions;
- Between 100 kHz and 10 GHz, basic restrictions on SAR are provided to prevent whole-body heat stress and excessive localized tissue heating; in the 100 kHz–10 MHz range, restrictions are provided on both current density and SAR; and
- Between 10 and 300 GHz, basic restrictions are provided on power density to prevent excessive heating in tissue at or near the body surface.

of exposure are the appearance of visual phosphenes and a minor reduction in heart rate during or immediately after exposure to ELF fields, but there is no evidence that these transient effects are associated with any long-term health risk. A reduction in nocturnal pineal melatonin synthesis has been observed in several rodent species following exposure to weak ELF electric and magnetic fields, but no consistent effect has been reported in humans exposed to ELF fields under controlled conditions. Studies involving exposures to 60-Hz magnetic fields up to 20 μT have not reported reliable effects on melatonin levels in blood.

BIOLOGICAL BASIS FOR LIMITING EXPOSURE (100 kHz–300 GHz)

The following paragraphs provide a general review of relevant literature on the biological effects and potential health effects of electromagnetic fields with frequencies of 100 kHz to 300 GHz. More detailed reviews can be found elsewhere (NRPB 1991; UNEP/WHO/IRPA 1993; McKinlay et al. 1996; Polk and Postow 1996; Repacholi 1998).

Direct effects of electromagnetic fields

Epidemiological studies. Only a limited number of studies have been carried out on reproductive effects and cancer risk in individuals exposed to microwave radiation. A summary of the literature was published by UNEP/WHO/IRPA (1993).

Reproductive outcomes. Two extensive studies on women treated with microwave diathermy to relieve the pain of uterine contractions during labor found no evidence for adverse effects on the fetus (Daels 1973, 1976). However, seven studies on pregnancy outcomes among workers occupationally exposed to microwave radiation and on birth defects among their offspring produced both positive and negative results. In some of the larger epidemiological studies of female plastic welders and physiotherapists working with shortwave diathermy devices, there were no statistically significant effects on rates of abortion or fetal malformation (Källen et al. 1982). By contrast, other studies on similar populations of female workers found an increased risk of miscarriage and birth defects (Larsen et al. 1991; Ouellet-Hellstrom and Stewart 1993). A study of male radar workers found no association between microwave exposure and the risk of Down's syndrome in their offspring (Cohen et al. 1977).

Overall, the studies on reproductive outcomes and microwave exposure suffer from very poor assessment of exposure and, in many cases, small numbers of subjects. Despite the generally negative results of these studies, it will be difficult to draw firm conclusions on reproductive risk without further epidemiological data on highly exposed individuals and more precise exposure assessment.

Cancer studies. Studies on cancer risk and microwave exposure are few and generally lack quantitative exposure assessment. Two epidemiological studies of radar workers in the aircraft industry and in the U.S. armed forces found no evidence of increased morbidity or mortality from any cause (Barron and Baraff 1958; Robinette et al. 1980; UNEP/WHO/IRPA 1993). Similar results were obtained by Lillienfeld et al. (1978) in a study of employees in the U.S. embassy in Moscow, who were chronically exposed to low-level microwave radiation. Selvin et al. (1992) reported no increase in cancer risk among children chronically exposed to radiation from a large microwave transmitter near their homes. More recent studies have failed to show significant increases in nervous tissue tumors among workers and military personnel exposed to microwave fields (Beall et al. 1996; Grayson 1996). Moreover, no excess total mortality was apparent among users of mobile telephones (Rothman et al. 1996a, b), but it is still too early to observe an effect on cancer incidence or mortality.

There has been a report of increased cancer risk among military personnel (Szmigielski et al. 1988), but the results of the study are difficult to interpret because neither the size of the population nor the exposure levels are clearly stated. In a later study, Szmigielski (1996) found increased rates of leukemia and lymphoma among military personnel exposed to EMF fields, but the assessment of EMF exposure was not well defined. A few recent studies of populations living near EMF transmitters have suggested a local increase in leukemia incidence (Hocking et al. 1996; Dolk et at. 1997a, b), but the results are inconclusive. Overall, the results of the small number of epidemiological studies published provide only limited information on cancer risk.

Laboratory studies. The following paragraphs provide a summary and critical evaluation of laboratory studies on the biological effects of electromagnetic fields with frequencies in the range 100 kHz–300 GHz. There are separate discussions on results of studies of volunteers exposed under controlled conditions and of laboratory studies on cellular, tissue, and animal systems.

Volunteer studies. Studies by Chatterjee et al. (1986) demonstrated that, as the frequency increases from approximately 100 kHz to 10 MHz, the dominant effect of exposure to a high-intensity electromagnetic field changes from nerve and muscle stimulation to heating. At 100 kHz the primary sensation was one of nerve tingling, while at 10 MHz it was one of warmth on the skin. In this frequency range, therefore, basic health protection criteria should be such as to avoid stimulation of excitable tissues and heating effects. At frequencies from 10 MHz to 300 GHz, heating is the major effect of absorption of electromagnetic energy, and temperature rises of more than 1–2 °C can have adverse health effects such as heat exhaustion and heat stroke (ACGIH 1996). Studies on workers in thermally stressful environments have shown worsening performance of simple tasks as

of other cellular systems and functional end-points, including lymphocyte capping, neoplastic cell transformation, and various membrane electrical and enzymatic properties (Postow and Swicord 1996). Of particular relevance to the potential carcinogenic effects of pulsed fields is the observation by Balcer-Kubiczek and Harrison (1991) that neoplastic transformation was accelerated in C3H/10T1/2 cells exposed to 2,450-MHz microwaves that were pulse-modulated at 120 Hz. The effect was dependent on field strength but occurred only when a chemical tumor-promoter, TPA, was present in the cell culture medium. This finding suggests that pulsed microwaves may exert co-carcinogenic effects in combination with a chemical agent that increases the rate of proliferation of transformed cells. To date, there have been no attempts to replicate this finding, and its implication for human health effects is unclear.

Interpretation of several observed biological effects of AM electromagnetic fields is further complicated by the apparent existence of "windows" of response in both the power density and frequency domains. There are no accepted models that adequately explain this phenomenon, which challenges the traditional concept of a monotonic relationship between the field intensity and the severity of the resulting biological effects.

Overall, the literature on athermal effects of AM electromagnetic fields is so complex, the validity of reported effects so poorly established, and the relevance of the effects to human health is so uncertain, that it is impossible to use this body of information as a basis for setting limits on human exposure to these fields.

Indirect effects of electromagnetic fields

In the frequency range of about 100 kHz–110 MHz, shocks and burns can result either from an individual touching an ungrounded metal object that has acquired a charge in a field or from contact between a charged individual and a grounded metal object. It should be noted that the upper frequency for contact current (110 MHz) is imposed by a lack of data on higher frequencies rather than by the absence of effects. However, 110 MHz is the upper frequency limit of the FM broadcast band. Threshold currents that result in biological effects ranging in severity from perception to pain have been measured in controlled experiments on volunteers (Chatterjee et al. 1986; Tenforde and Kaune 1987; Bernhardt 1988); these are summarized in Table 3. In general, it has been shown that the threshold currents that produce perception and pain vary little over the frequency range 100 kHz–1 MHz and are unlikely to vary significantly over the frequency range up to about 110 MHz. As noted earlier for lower frequencies, significant variations between the sensitivities of men, women, and children also exist for higher frequency fields. The data in Table 3 represent the range of 50th percentile values for people of different sizes and different levels of sensitivity to contact currents.

Table 3. Ranges of threshold currents for indirect effects, including children, women, and men.

Indirect effect	Threshold current (mA) at frequency: 100 kHz	1 MHz
Touch perception	25–40	25–40
Pain on finger contact	33–55	28–50
Painful shock/let-go threshold	112–224	Not determined
Severe shock/breathing difficulty	160–320	Not determined

Summary of biological effects and epidemiological studies (100 kHz–300 GHz)

Available experimental evidence indicates that the exposure of resting humans for approximately 30 min to EMF producing a whole-body SAR of between 1 and 4 W kg^{-1} results in a body temperature increase of less than 1 °C. Animal data indicate a threshold for behavioral responses in the same SAR range. Exposure to more intense fields, producing SAR values in excess of 4 W kg^{-1}, can overwhelm the thermoregulatory capacity of the body and produce harmful levels of tissue heating. Many laboratory studies with rodent and nonhuman primate models have demonstrated the broad range of tissue damage resulting from either partial-body or whole-body heating producing temperature rises in excess of 1–2°C. The sensitivity of various types of tissue to thermal damage varies widely, but the threshold for irreversible effects in even the most sensitive tissues is greater than 4 W kg^{-1} under normal environmental conditions. These data form the basis for an occupational exposure restriction of 0.4 W kg^{-1}, which provides a large margin of safety for other limiting conditions such as high ambient temperature, humidity, or level of physical activity.

Both laboratory data and the results of limited human studies (Michaelson and Elson 1996) make it clear that thermally stressful environments and the use of drugs or alcohol can compromise the thermoregulatory capacity of the body. Under these conditions, safety factors should be introduced to provide adequate protection for exposed individuals.

Data on human responses to high-frequency EMF that produce detectable heating have been obtained from controlled exposure of volunteers and from epidemiological studies on workers exposed to sources such as radar, medical diathermy equipment, and heat sealers. They are fully supportive of the conclusions drawn from laboratory work, that adverse biological effects can be caused by temperature rises in tissue that exceed 1°C. Epidemiological studies on exposed workers and the general public have shown no major health effects associated with typical exposure environments. Although there are deficiencies in the epidemiological work, such as poor exposure assessment, the studies have yielded no convincing evidence that typical exposure levels lead to adverse reproductive outcomes or an increased cancer risk in exposed individuals. This is consistent with the results of laboratory research on cellular and animal

models, which have demonstrated neither teratogenic nor carcinogenic effects of exposure to athermal levels of high-frequency EMF.

Exposure to pulsed EMF of sufficient intensity leads to certain predictable effects such as the microwave hearing phenomenon and various behavioral responses. Epidemiological studies on exposed workers and the general public have provided limited information and failed to demonstrate any health effects. Reports of severe retinal damage have been challenged following unsuccessful attempts to replicate the findings.

A large number of studies of the biological effects of amplitude-modulated EMF, mostly conducted with low levels of exposure, have yielded both positive and negative results. Thorough analysis of these studies reveals that the effects of AM fields vary widely with the exposure parameters, the types of cells and tissues involved, and the biological end-points that are examined. In general, the effects of exposure of biological systems to athermal levels of amplitude-modulated EMF are small and very difficult to relate to potential health effects. There is no convincing evidence of frequency and power density windows of response to these fields.

Shocks and burns can be the adverse indirect effects of high-frequency EMF involving human contact with metallic objects in the field. At frequencies of 100 kHz–110 MHz (the upper limit of the FM broadcast band), the threshold levels of contact current that produce effects ranging from perception to severe pain do not vary significantly as a function of the field frequency. The threshold for perception ranges from 25 to 40 mA in individuals of different sizes, and that for pain from approximately 30 to 55 mA; above 50 mA there may be severe burns at the site of tissue contact with a metallic conductor in the field.

GUIDELINES FOR LIMITING EMF EXPOSURE

Occupational and general public exposure limitations

The occupationally exposed population consists of adults who are generally exposed under known conditions and are trained to be aware of potential risk and to take appropriate precautions. By contrast, the general public comprises individuals of all ages and of varying health status, and may include particularly susceptible groups or individuals. In many cases, members of the public are unaware of their exposure to EMF. Moreover, individual members of the public cannot reasonably be expected to take precautions to minimize or avoid exposure. It is these considerations that underlie the adoption of more stringent exposure restrictions for the public than for the occupationally exposed population.

Basic restrictions and reference levels

Restrictions on the effects of exposure are based on established health effects and are termed basic restrictions. Depending on frequency, the physical quantities used to specify the basic restrictions on exposure to EMF are current density, SAR, and power density. Protection against adverse health effects requires that these basic restrictions are not exceeded.

Reference levels of exposure are provided for comparison with measured values of physical quantities; compliance with all reference levels given in these guidelines will ensure compliance with basic restrictions. If measured values are higher than reference levels, it does not necessarily follow that the basic restrictions have been exceeded, but a more detailed analysis is necessary to assess compliance with the basic restrictions.

General statement on safety factors

There is insufficient information on the biological and health effects of EMF exposure of human populations and experimental animals to provide a rigorous basis for establishing safety factors over the whole frequency range and for all frequency modulations. In addition, some of the uncertainty regarding the appropriate safety factor derives from a lack of knowledge regarding the appropriate dosimetry (Repacholi 1998). The following general variables were considered in the development of safety factors for high-frequency fields:

- effects of EMF exposure under severe environmental conditions (high temperature, etc.) and/or high activity levels; and
- the potentially higher thermal sensitivity in certain population groups, such as the frail and/or elderly, infants and young children, and people with diseases or taking medications that compromise thermal tolerance.

The following additional factors were taken into account in deriving reference levels for high-frequency fields:

- differences in absorption of electromagnetic energy by individuals of different sizes and different orientations relative to the field; and
- reflection, focusing, and scattering of the incident field, which can result in enhanced localized absorption of high-frequency energy.

Basic restrictions

Different scientific bases were used in the development of basic exposure restrictions for various frequency ranges:

- Between 1 Hz and 10 MHz, basic restrictions are provided on current density to prevent effects on nervous system functions;
- Between 100 kHz and 10 GHz, basic restrictions on SAR are provided to prevent whole-body heat stress and excessive localized tissue heating; in the 100 kHz–10 MHz range, restrictions are provided on both current density and SAR; and
- Between 10 and 300 GHz, basic restrictions are provided on power density to prevent excessive heating in tissue at or near the body surface.

In the frequency range from a few Hz to 1 kHz, for levels of induced current density above 100 mA m^{-2}, the thresholds for acute changes in central nervous system excitability and other acute effects such as reversal of the visually evoked potential are exceeded. In view of the safety considerations above, it was decided that, for frequencies in the range 4 Hz to 1 kHz, occupational exposure should be limited to fields that induce current densities less than 10 mA m^{-2}, i.e., to use a safety factor of 10. For the general public an additional factor of 5 is applied, giving a basic exposure restriction of 2 mA m^{-2}. Below 4 Hz and above 1 kHz, the basic restriction on induced current density increases progressively, corresponding to the increase in the threshold for nerve stimulation for these frequency ranges.

Established biological and health effects in the frequency range from 10 MHz to a few GHz are consistent with responses to a body temperature rise of more than 1°C. This level of temperature increase results from exposure of individuals under moderate environmental conditions to a whole-body SAR of approximately 4 W kg^{-1} for about 30 min. A whole-body average SAR of 0.4 W kg^{-1} has therefore been chosen as the restriction that provides adequate protection for occupational exposure. An additional safety factor of 5 is introduced for exposure of the public, giving an average whole-body SAR limit of 0.08 W kg^{-1}.

The lower basic restrictions for exposure of the general public take into account the fact that their age and health status may differ from those of workers.

In the low-frequency range, there are currently few data relating transient currents to health effects. The ICNIRP therefore recommends that the restrictions on current densities induced by transient or very short-term peak fields be regarded as instantaneous values which should not be time-averaged.

The basic restrictions for current densities, whole-body average SAR, and localized SAR for frequencies between 1 Hz and 10 GHz are presented in Table 4, and those for power densities for frequencies of 10–300 GHz are presented in Table 5.

REFERENCE LEVELS

Where appropriate, the reference levels are obtained from the basic restrictions by mathematical modeling and by extrapolation from the results of laboratory investigations at specific frequencies. They are given for the condition of maximum coupling of the field to the exposed individual, thereby providing maximum protection. Tables 6 and 7 summarize the reference levels for occupational exposure and exposure of the general public, respectively, and the reference levels are illustrated in Figs. 1 and 2. The reference levels are intended to be spatially averaged values over the entire body of the exposed individual, but with the important proviso that the basic restrictions on localized exposure are not exceeded.

For low-frequency fields, several computational and measurement methods have been developed for deriving field-strength reference levels from the basic restrictions.

Table 4. Basic restrictions for time varying electric and magnetic fields for frequencies up to 10 GHz.[a]

Exposure characteristics	Frequency range	Current density for head and trunk (mA m^{-2}) (rms)	Whole-body average SAR (W kg^{-1})	Localized SAR (head and trunk) (W kg^{-1})	Localized SAR (limbs) (W kg^{-1})
Occupational exposure	up to 1 Hz	40	—	—	—
	1–4 Hz	40/*f*	—	—	—
	4 Hz–1 kHz	10	—	—	—
	1–100 kHz	*f*/100	—	—	—
	100 kHz–10 MHz	*f*/100	0.4	10	20
	10 MHz–10 GHz	—	0.4	10	20
General public exposure	up to 1 Hz	8	—	—	—
	1–4 Hz	8/*f*	—	—	—
	4 Hz–1 kHz	2	—	—	—
	1–100 kHz	*f*/500	—	—	—
	100 kHz–10 MHz	*f*/500	0.08	2	4
	10 MHz–10 GHz	—	0.08	2	4

[a] Note:

1. *f* is the frequency in hertz.
2. Because of electrical inhomogeneity of the body, current densities should be averaged over a cross-section of 1 cm^2 perpendicular to the current direction.
3. For frequencies up to 100 kHz, peak current density values can be obtained by multiplying the rms value by $\sqrt{2}$ (~1.414). For pulses of duration t_p, the equivalent frequency to apply in the basic restrictions should be calculated as $f = 1/(2t_p)$.
4. For frequencies up to 100 kHz and for pulsed magnetic fields, the maximum current density associated with the pulses can be calculated from the rise/fall times and the maximum rate of change of magnetic flux density. The induced current density can then be compared with the appropriate basic restriction.
5. All SAR values are to be averaged over any 6-min period.
6. Localized SAR averaging mass is any 10 g of contiguous tissue; the maximum SAR so obtained should be the value used for the estimation of exposure.
7. For pulses of duration t_p, the equivalent frequency to apply in the basic restrictions should be calculated as $f = 1/(2t_p)$. Additionally, for pulsed exposures in the frequency range 0.3 to 10 GHz and for localized exposure of the head, in order to limit or avoid auditory effects caused by thermoelastic expansion, an additional basic restriction is recommended. This is that the SA should not exceed 10 mJ kg^{-1} for workers and 2 mJ kg^{-1} for the general public, averaged over 10 g tissue.

RESPONSE TO QUESTIONS AND COMMENTS ON THE GUIDELINES FOR LIMITING EXPOSURE TO TIME-VARYING ELECTRIC, MAGNETIC, AND ELECTROMAGNETIC FIELDS (up to 300 GHz)*

1) *Question:* What dosimetric models were used by ICNIRP to derive the reference levels from the basic restrictions?

Answer: To a limited extent, the ICNIRP guidelines provide a description of the dosimetric models that were used, and give references to the primary literature describing these models in detail. However, for purposes of brevity, ICNIRP decided not to include a detailed discussion of these dosimetric models in its published guidelines.

2) *Question:* On which specific data are the guidelines for magnetic fields at frequencies less than 4 Hz based?

Answer: The guidelines for magnetic fields below 4 Hz are ramped in a manner that joins the ELF reference levels with the values previously recommended by ICNIRP for static fields, i.e., at 0 Hz (ICNIRP. Guidelines on limits of exposure to static magnetic fields. Health Physics 66:100-106; 1994), and they are not based on specific biological studies.

3) *Question:* Why was 10 g chosen as the averaging mass without defining a regular tissue geometry?

Answer: The 10 g of tissue is intended to be a mass of contiguous tissue with nearly homogeneous electrical properties. In specifying a contiguous mass of tissue, ICNIRP recognizes that this concept can be used in computational dosimetry, but may present difficulties for direct physical measurements. A simple geometry such as a cubic tissue mass can be used provided that the calculated dosimetric quantities have conservative values relative to the exposure guidelines.

4) *Question:* Is the 10 g averaging mass appropriate for the limbs of the body?

Answer: ICNIRP recognizes that, under certain exposure conditions, the localized SAR basic restrictions for occupational and general public exposures may be exceeded in the wrist by a small amount. However, this condition is not

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* This response was published in Health Physics 75 (4), 438-439; 1998

considered to present any significant health risk.

5) *Question:* Would exposure to RF fields at the reference levels recommended for workers or members of the general public lead to an increase in body temperature?

Answer: Adherence to the ICNIRP guidelines under either occupational or public exposure conditions would prevent an increase in temperature to levels that lie outside of the normal range of variation associated with body functions.

6) *Question:* Under certain circumstances, the fields emanating from appliances and machine tools can exceed the ICNIRP reference levels. Is there a problem with adhering to the ICNIRP guidelines under these circumstances?

Answer: ICNIRP recognizes that a number of common devices emit localized fields in excess of the reference levels. However, this generally occurs under conditions of exposure where the basic restrictions are not exceeded because of weak coupling between the field and the body.

7) *Question:* What is the rationale for recommending a public exposure guideline of 5 kV m^{-1} at 50 Hz and 4.17 at 60 Hz?

Answer: The reference levels for electric fields at power frequencies were set to limit indirect effects of contact with electrical conductors in the field. Provided that adverse health impacts of indirect effects of exposure (such as microshocks) can be avoided, ICNIRP recognizes that the general public reference levels at power frequencies can be exceeded provided that the basic restriction of 2 mA m^{-2} is not surpassed. In many practical exposure situations external power frequency electric fields at the reference levels will induce current densities in central nervous tissues that are well below the basic restrictions. Recent dosimetry calculations indicate that the reference levels for power-frequency magnetic fields are conservative guidelines relative to meeting the basic restrictions on current density for both public and occupational exposures (Dimbylow, P.J. Induced current densities from low-frequency magnetic fields in a 2 mm resolution, anatomically realistic model of the body. Phys. Med. Biol. 43:221-230; 1998).

8) *Question:* Why did ICNIRP not recommend guidelines for pulsed and/or transient fields at low frequencies?

Answer: ICNIRP has provided frequency-dependent basic restrictions and reference levels from which a hazard assessment and exposure guidelines on

pulsed and/or transient sources can be derived. A conservative approach involves representing a pulsed or transient EMF signal as a Fourier spectrum of its components in each frequency range, which can then be compared with the ICNIRP reference levels for those frequencies. The summation formulae for simultaneous exposure to multiple frequency fields given in the ICNIRP guidelines can also be applied for purposes of determining compliance with the ICNIRP basic restrictions.

9) *Question:* Why does ICNIRP not recommend higher basic restrictions or reference levels on exposure to ELF fields when exposures are of short duration?

Answer: The basic restrictions for ELF fields are based on established adverse effects on the central nervous system with a safety factor included. Such acute effects are essentially instantaneous, and it is ICNIRP's view that there is no scientific justification to modify the basic restrictions for exposures of short duration.

10) *Question:* Is the basic restriction of 10 mA m^{-2} based only on the threshold for acute effects in the central nervous system, or does it apply to other tissues in the trunk of the body?

Answer: The basic restriction of 10 mA m^{-2} is intended to protect against acute exposure effects on central nervous system tissues in the head and trunk of the body, with a safety factor of 10. ICNIRP recognizes that this basic restriction may permit higher current densities in body tissues other than the central nervous system under the same exposure conditions.

11) *Question:* Why are there no averaging times for induced and contact currents at low frequencies?

Answer: ICNIRP has not included time averaging or limitations on the time of exposure to fields at low frequencies because the known effects of induced and contact currents at those frequencies are acute phenomena involving a rapid response of the nervous system.

12) *Question:* Does ICNIRP intend to modify its guidelines at 300 GHz to remove the discontinuity that occurs at this frequency between the EMF guidelines and the recently published laser guidelines (ICNIRP. Guidelines on limits of exposure to laser radiation of wavelengths between 180 nm and 1,000μm, Health Physics 71:804-819; 1997)?

Answer: ICNIRP recognizes that a discontinuity exists in the EMF guidelines at

300 GHz relative to the exposure limits at this frequency in the recently published laser radiation guidelines. This difficulty will be addressed by ICNIRP as more experimental evidence becomes available upon which to base a revision of the guidelines at this frequency. It should be noted that, at the present time, there are no sources of radiation at this frequency to which workers or members of the general public are exposed.

13) *Question:* What is the basis for the added safety factors used for basic restrictions and reference levels for the general public relative to workers?

Answer: The safety factors used by ICNIRP are conservative, and were selected for reasons given in the published guidelines (p. 508).

14) *Question:* Are there scientific data indicating a variation in sensitivity to EMF among individual workers or members of the general public?

Answer: ICNIRP is aware of scientific data on variations among individuals in electrical and thermal sensitivity, and in accord with conventional health protection principles, has applied safety factors that encompass a possible range of individual sensitivities to EMF.

15) *Question:* It is not clear how the EMF guidelines should be applied to exposure of the fetus, especially when the mother is at work. Would the mother be subject to the general public exposure guidelines, and in certain cases, have to cease work during pregnancy as a result?

Answer: ICNIRP recognizes that exposure of the fetus and pregnant mother may require evaluation on a case-by-case basis. Exposure of the fetus and pregnant mother is an issue that should be dealt with on the basis of either national policy or administrative rules established by individual employers.

16) *Question:* For devices utilized in both occupational and public settings, how is the user of the ICNIRP guidelines to decide which set of basic restrictions apply?

Answer: This decision is to be made on the basis of administrative policies established by the specific organization using the ICNIRP guidelines.

17) *Question:* Are farm workers in fields under powerlines expected to adhere to occupational or general public exposure guidelines?

Answer: ICNIRP recognizes that differences exist in national policies on occupational versus public exposures under this (and similar) conditions. In its

ICNIRP GUIDELINES ON LIMITING EXPOSURE TO NON-IONIZING RADIATION

guidelines ICNIRP has defined occupational and public exposures in general terms. However, for exposure situations such as the above, it is ICNIRP's opinion that authorities in each country should decide on whether occupational or general public guidelines are to be applied in accord with existing policies.

Conclusions on Health Effects to The Public from Mobile Phones, Base Stations, Mobile towers and General EMF Exposure, Based on Vodafone and Telefonica's Views on Public Safety and the ICNIRP:

- **Telefonica and Vodafone say they work within the "Guidelines" set by the ICNIRP.**

- **The ICNIRP is a private non-government organisation that has scientist that have worked or work in the telecommunication industry. They are not NON-INDUSTRY scientist meaning they have conflicts of interest.**

- **They ignore 1000s of well published documented studies from non-industry (Non-telecommunications) scientists showing clear evidence and warnings to EMF exposure in the low and high frequency fields.**

- **The ICNIRP guidelines are voluminous and vague, they do not offer a fair and thorough safety analysis for EMF exposure for low and high frequency which they admit on their website by not providing a "Certificate of Conformity".**

- **There main focus is heating and thermal exposure to EMF and provide little to no evidence on physical and non-physical biological effects, neurological effects, reproductive effects and cancerous effects.**

- **The telecommunication industries mainly (Telefonica and Vodafone) have continued to build this 5G infrastructure, using mobile towers and base stations for the past 20 years relying on the guidelines set out by the ICNIRP IN 1998. These guidelines are unacceptable and are not safety standards for EMF exposure. This a crime against humanity and they must be held accountable.**

ADD HEALTH EFFECTS CLIPS FROM 5G DECIMATION OF HUMANITY.

OTHER ORGINISATIONS WORTH LOOKING INTO

Who we are

CENELEC is the European Committee for Electrotechnical Standardization and is responsible for standardization in the electrotechnical engineering field. CENELEC prepares voluntary standards, which help facilitate trade between countries, create new markets, cut compliance costs and support the development of a Single European Market.

CENELEC creates market access at European level but also at international level, adopting international standards wherever possible, through its close collaboration with the International Electrotechnical Commission (IEC), under the Frankfurt Agreement.

In an ever more global economy, CENELEC fosters innovation and competitiveness, making technology available industry-wide through the production of voluntary standards.

Through the work of its members together with its experts, the industry federations and consumers, European Standards are created in order to encourage technological development, to ensure interoperability and to guarantee the safety and health of consumers and provide environmental protection.

Designated as a European Standards Organization by the European Commission, CENELEC is a non-profit technical organization set up under Belgian law. It was created in 1973 as a result of the merger of two previous European organizations: CENELCOM and CENEL.

European Standards Organizations (ESOs)

CENELEC is a European regional standards organization that together with its sister organizations CEN, the European Committee for Standardization, and ETSI, the European Telecommunications Standards Institute, compose the so-called and known **European Standards Organizations** (ESOs) that are officially recognised by the European Commission and act as a European platform through which European Standards are developed.

In the European Union, only standards developed by CEN, CENELEC and ETSI are recognised as 'European Standards'. Hence, CENELEC closely cooperates with CEN and ETSI; working jointly in the interest of European harmonization, creating both standards requested by the market and harmonized standards in support of European legislation.

CEN, CENELEC, ETSI are the regional mirror bodies to their international counterparts, i.e. ISO (the International Organization for Standardization), IEC (the International Electrotechnical Commission) and ITU-T (the International Telecommunication Union, telecommunication standardization sector) respectively.

CEN

The European Committee for Standardization (CEN) is a business catalyst in Europe, removing trade barriers for European stakeholders such as industry, public administration, service providers, consumers and other stakeholders. Its mission is to foster the European economy in global trading, the welfare of European citizens, and the environment. Through its services CEN provides a platform for the development of European Standards and other specifications.

CEN's 34 National Members work together to develop voluntary European Standards (ENs) in various sectors to build a European Internal Market for goods and services and to position Europe in the global economy. By supporting research, and helping disseminate innovation, standards are a powerful tool for economic growth. More than 60.000 technical experts as well as business federations, consumer and other societal interest organizations are involved in the CEN network that reaches over 480 million people.

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For more information, you can visit www.cen.eu

ETSI

ETSI produces globally-applicable standards for Information and Communications Technologies (ICT), including fixed, mobile, radio, converged, aeronautical, broadcast and internet technologies and is officially recognized by the European Union as a European Standards Organization. ETSI is an independent, not-for-profit association whose 740 member companies and organizations, drawn from 62 countries across 5 continents worldwide, determine the ETSI work programme and participate directly in its work.

For more information, please go to www.etsi.org

Telecommunications Safety

Introduction | Our Role & Activities | Standards

ETSI activity is carried out in close cooperation with CENELEC, who have the lead on developing Harmonised Standards enabling compliant equipment to be marketed. ETSI provide technical expertise to CENELEC on telecommunications-specific issues and ensure that equipment built to ETSI standards can comply with safety requirements.

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THE CASE OF EILEEN COOPER

Eileen Cooper suffered for years with sleep problems, dizziness, headaches and vertigo only to be told by the doctors that it was stress or a virus. She then developed Breast Cancer at the age of 38 and discovered she was living in a Cancer Cluster. (Living very close to a Mobile Phone tower)

There are millions of People living around cancer clusters in the UK and around the world.

She was living less than 100 meters from a phone mast and this is what was causing the problems. The conditions she reported to her doctor is known as a condition called electro sensitivity, this seriously affects all biological life on earth. As soon as the phone mast was removed residents living close by started reported feeling much better.

ALL THE NEGATIVE SYMPTOMS DISSAPPEARED

Eileen runs The Radiation Research Trust in the UK, a UK charity which is supported by members of parliament. Those politicians should be warning the public but they are not.

Eileen is the director of The Radiation Research Trust and is the founder and board member of the International EMF Alliance. She explains that an important reflex study involving 12 research groups across 7 European countries was carried out which found that mobile phone mast exposure destroys DNA and human cells. The study cost £3million.

The UK Government receives money from the Telecommunications industry. They received 22.47BILLION! in just the auction of the phone licences. The sector brings in around 15BILLION in taxes per year. The government has put just 6 Million back into research to date which represents just 0.04% of the tax revenue of one single year of operation. It's totally disproportionate considering the level of health risk effects.

HUMAN HEALTH EFFECTS OF EMF: THE COST OF DOING NOTHING

Human Health Effects of EMFs: The Cost of Doing Nothing

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Abstract. Everyone is exposed to electromagnetic fields (EMFs) from electricity (extremely low frequency, ELF), communication frequencies and wireless devices (radiofrequency, RF), as well as naturally occurring EMFs. Concern of health hazards from EMFs has increased as the use of mobile phones and other wireless devices has grown in all segments of the population, especially children. While there has been strong evidence for an association between leukemia and residential or occupational exposure to ELF EMFs for many years, the standards in existence are not sufficiently stringent to protect from an increased risk of cancer. ELF EMFs also increase risk of at least two types of neurodegenerative diseases. For RF EMFs, standards are set at levels designed to avoid tissue heating, in spite of many reports of biological effects at intensities too low to cause significant heating. Recent evidence demonstrates elevations in risk of brain cancer and acoustic neuroma only on the side of the head where individuals used their mobile phone. Individuals who begin exposure at younger ages are more vulnerable. These data indicate that the existing standards for radiofrequency exposure are not adequate. While there are many unanswered questions, the cost of doing nothing may result in an increasing number of people, many of them young, developing these diseases.

1. Introduction

It has been known for many years that high energy EMFs (X-rays, gamma rays, cosmic rays) have sufficient energy to directly break chemical bonds, causing damage to molecules ranging from water to DNA that results in cancer and birth defects [1]. Thus these forms of EMF are "ionizing". There is less consensus as to whether lower energy forms of EMFs, such as radiofrequency and ELF EMFs, can cause disease. In spite of strong evidence for such relationships from the biomedical community, most national and international bodies have discounted this evidence, based on the belief that lower energy EMFs cannot possibly cause serious disease [2]. This particular point of view is held by many in the physics and engineering communities, individuals not known for their detailed knowledge of medicine. There are legitimate concerns as to what mechanisms might explain these relationships. The purpose of this review is to provide an overview of the issues, explore both the associations between exposure and disease and the mechanisms that might explain them, and to propose biologically-based standards of exposure which, although difficult to achieve, would be more protective of human health.

While there are a variety of diseases of possible concern, this review will focus on only two major classes, cancer and neurodegenerative disease. This is for two reasons. The evidence for an association with EMF is strongest for these diseases, and these are very serious diseases that cause significant morbidity and mortality in humans.

2. Health Effects of ELF EMFs

There has been evidence that residential exposure to elevated residential magnetic fields results in an increased risk for leukemia since the pioneering studies of Wertheimer and Leeper [3]. Most subsequent studies have confirmed elevated risks of leukemia [4-6], and several meta-analyses have shown significantly elevated odds ratios (ORs) whether exposure was determined through use of wire codes or measured magnetic fields [7-9]. In addition there is evidence that leukemia is elevated in adults employed in occupations that involve elevated exposure to EMFs from electricity [10]. Meta-analyses of occupational exposure have also reported elevated risks for leukemia, with less strong evidence for relations to other kinds of cancer [11]. There has also been a meta-analysis reporting a significant elevation in rates of brain cancer among adults working in "electrical" occupations [12].

There is also strong evidence for a relationship between occupational exposure to EMFs and neurodegenerative diseases, Alzheimer's and amyotrophic lateral sclerosis (ALS). In a meta-analysis of EMFs and Alzheimer's disease, Garcia et al. [13] report an OR ratio of 2.03 (95% CL = 1.38-3.00) for case-control studies, and 1.62 (95% CL = 1.16-2.80) for cohort studies. Ahlbom [14] reviewed seven studies of EMF exposure and ALS, and found an overall significant OR of 1.5 (95% CL = 1.2-1.7). More recent studies of Hakansson et al. [15] found an OR of 2.2 (95% CL = 1.0-4.7) among welders and other workers exposed to elevated magnetic fields.

3. Human Disease from Exposure to RF EMFs

Until recently there has been relatively little attention to RF exposures and human health. Older studies have reported elevations in both leukemia and brain tumors among individuals with occupational exposures to RF (see [16] for references), but results were not very consistent across studies. Recent reports have found elevated rates of leukemia among children who live near AM radio transmitter sites [17-19]. This is the same cancer elevated with exposure to powerline frequency EMFs, suggesting that leukemia is the cancer most likely to show elevated risk with whole body exposure to a variety of EMFs frequencies.

With the advent of enormous increases in the use of mobile phones, we now have a situation in which a very large segment of society is regularly exposed to high levels of RF. In addition, the whole population has increased exposure through the placement of mobile phone towers, wireless buildings and even wireless cities. The strongest evidence for hazards has come from Europe, especially Scandinavia, where mobile phones were initially manufactured, and have been in wide use for a longer period of time as compared to other parts of the world.

Recent studies have found an elevated risk of brain tumors and acoustic neurons in individuals who have used mobile phones regularly for ten years or longer. A meta-analysis by Hardell et al. [20] based on four studies finds an OR of 2.0 (95% CL = 1.2-3.4) for glioma among individuals who have used a mobile phone for ten years or more, but only on the side of the head where the phone was used. There was also an OR of 2.4 (95%CL = 1.1-5.3) for acoustic neuroma among long-term users. Risks for meningioma were elevated, but not statistically significant. Kundi [21] has reported on 33 epidemiological studies, and finds that the combined ORs from these studies show an OR of 1.5 (95% CL = 1.2-1.8) for glioma. There was also a nonsignificant elevation in ORs for acoustic neuroma but no relationship with meningioma. Hopefully, additional information will come from the pooled results of the INTERPHONE study, a 13-nation investigation coordinated by the World Health Organization, which should be available in the near future. Interestingly, the Israeli component of this study has found an elevated risk of parotid gland cancer with long-term mobile phone use [22], but results from the full INTERPHONE study of parotid gland cancers are also not yet available.

There is a particular concern about risks to children exposed to RF. Hardell et al. [23] studied relative risk based on the age when a person began to use a mobile phone, and found that individuals whose use began while they were in their 20's displayed ORs that were higher than those of older

persons for both analog and cordless phones when assessed at either >1 or >5 year latency. Later Hardell reported at a meeting (personal communication) that children who began use of a mobile phone prior to the age of 20 had an OR of developing glioma of 5.2 (95% CL = 2.2-12) after only one plus year of mobile phone use, while for all ages the OR was 1.4 (95% CL = 1.1-1.7). The same relative relationship was seen with use of a cordless phone, where use before the age of 20 years gave an OR of 4.4 (95% CL = 1.9-10), whereas for all ages the OR was 1.4 (95% CL = 1.1-1.8). These studies support the conclusion that cordless phones increase both exposure levels and disease by about the same magnitude as do mobile phones, and that use of either results in an increased risk of gliomas.

4. Why Have These Results not been Reflected in New Standards of Exposure?

In spite of this consistency in observations relating to ELF EMFs and leukemia, and the developing evidence for a relationship between mobile phone use and elevated risk of brain cancer and acoustic neuroma, there has been a general failure of governments and international advisory bodies to accept the reported relationships as being cause and effect, and to follow through with standards designed to reduce exposure. This is a consequence of two major scientific problems, as well as the public excitement and support of wireless technologies and the political power of the industry. Animal studies have not consistently demonstrated cancer as a result of exposure to ELF EMFs. In addition, no single mechanism has been identified to be the basis for the development of cancer following exposure to EMFs.

In spite of the widespread belief that most cancer is genetic, recent studies of identical twins have convincingly shown that most cancers result from some environmental exposure and are not primarily genetic [24]. This is not to say that genetics is unimportant, since genetic susceptibility will determine whether or not environmentally-induced cancers develop and become life-threatening. There is also the widespread and mistaken belief that all carcinogens act by causing direct DNA damage, as is the case with ionizing radiation. However, many proven human carcinogens do not cause direct DNA damage. These are identified as "non-mutagenic carcinogens" by the USEPA, and include such well-documented carcinogens as arsenic [25-26] and dioxins [27]. Exact mechanisms are not known to explain the carcinogenicity of either, although a number of possible factors are known. Thus the fact that ELF and RF EMFs are "non-ionizing" does not mean they are not carcinogens. Both ELF and RF EMFs are known to cause gene induction, generate reactive oxygen species, trigger formation of heat shock proteins and cause other alterations in cellular function, any one of which might lead to cancer (see [16] for references and detailed discussion).

The causes of Alzheimer's disease and ALS are also not known. In the case of Alzheimer's disease there is the accumulation in the brain of two different deposits that come from normal proteins, called amyloid plaques and neurofibulary tangles [28]. There is uncertainty whether these deposits cause the disease or are only associated with the disease. Recent evidence suggests that reactive oxygen species formation may be a major factor in causing cell death in Alzheimer's disease [29]. ALS is even less well understood, but the disease is the result of death of upper and lower motoneurons [30]. Both reactive oxygen species [31] and heat-shock proteins [32] have been implicated in the resulting cell death. As with cancer, genetics plays a minor role in etiology of these diseases. There is no reason to discount an association with exposure to EMFs on the basis of lack of firm knowledge of a mechanism, as the mechanisms causing both diseases are uncertain. It is worth noting that reactive oxygen species and heat-shock proteins are implicated in both non-mutagenic carcinogen actions and these neurodegenerative diseases, and that both are altered by EMFs.

5. Proposed EMF Standards that are Based on Studies of Human Health after Exposure

The Bioinitiative Report [33] presents recommendations for standards of EMF exposure that are based on the epidemiological evidence in human populations. For ELF EMFs the proposed standard is 1 mG (0.1 μT), to be compared with the current International Commission on Non-ionizing Radiation Protection (ICNIRP) standard of 1,000 mG (100 μT). For RF radiation the proposed standard is 0.1

$\mu W/cm^2$, to be compared with the US Federal Communications Commission standard of 583 $\mu W/cm^2$ for 875 MHz cell phone frequency, and 1,000 $\mu W/cm^2$ in the frequency range of 1,800 - 1,950 MHz. The difference between these numbers show the magnitude of the problem. There is no question that a sudden imposition of standards so drastically different from those existing would impose severe hardship. However, there is also no question that the human studies clearly indicate that the existing standards are not protective of human health.

The benefits to society derived from electricity and wireless communications are significant, and certainly none of us is willing to return to the pre-electric age. However it is imperative that society at least acknowledge the disparities between current standards and current evidence of adverse health effects. Rigid and sudden imposition of the standards we propose is certainly unrealistic at the present time, but these levels are appropriate goals that could at least be approached by a combination of development of new technology and voluntary changes in behaviors.

6. The Costs of Being Wrong

At present we do not know precisely to what degree risk of cancer and neurodegenerative diseases is increased by excessive exposure to EMFs. Human studies are difficult under any circumstances, but those difficulties are even greater when studying the effects of EMFs. Levels of exposure for each of us vary over the course of every day as we move through our environment and use appliances and mobile phones. This makes exposure assessment extremely difficult. Under the circumstances of poor exposure assessment there is a great likelihood that the total risk is underappreciated.

There is considerable evidence that the developing organism is more vulnerable to several environmental insults than are adults [34-35]. The reality is that children throughout the world are using mobile phones at increasing rates and for long durations. Therefore, if there are real risks, and especially if children are more susceptible, we may be facing an epidemic of brain and other cancers. The concern is increased because, to date, there are few warnings to parents and physicians advising restrictions on use of mobile phones by children. While the evidence at present is certainly less than total proof of a relationship between exposure and elevated risk of cancer, it is sufficiently strong so as to demand precaution. The alternative may be significant increases in certain cancers, especially leukemia and brain cancer. It is not clear whether other kinds of cancer are also at increased risk following exposure, since there has not been much study of, for example, the possible health hazards of wearing a cell phone on your belt and pelvic cancers.

Fortunately, the rates of leukemia and brain cancer are not high. There have recently been significant improvements in treatment of leukemia, especially among children. Kundi [21] has hypothesized that use of mobile phones may increase rates of some forms of brain cancer, such as gliomas, by as much as 50%. Even if this is true, this certainly does not mean that every exposed person will develop brain cancer. Such an increase in brain cancer would still have a significant impact, not only on the individuals affected but also on society, especially given that much of this increase is likely to occur among young people.

Application of the Precautionary Principle is appropriate under the circumstances where there is a demonstrated elevation in rates of serious diseases in humans following elevated EMF exposure, but has many unanswered questions as to mechanisms responsible. We need additional research, of course, and much better exposure assessment. The evidence that we have at present is too convincing to be ignored. Our national and international standards are obsolete, and ignore evidence reported by many different investigators. The lack of certainty with regard to mechanisms and animal models is no reason to ignore studies of human health. Similar lack of certainty regarding mechanisms also exists for some chemicals, yet precautionary measures are commonly taken to reduce exposure. We need the electric and communications industries to be proactive in developing products that can be used with reduced exposures. We need governments and international organizations to set standards that are based on the evidence of whether there are hazards to humans, not on a hypothesis that is not

credible based on the evidence from animal and cellular studies. Most importantly, we need individuals to understand that personal decisions will significantly impact the level to which they are exposed to both ELF and RF EMFs.

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Electromagnetic Fields and the Public: EMF Standards and Estimation of Risk

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Abstract. Mobile communications are a relatively new and additional source of electromagnetic exposure for the population. Standard daily mobile-phone use is known to increase RF-EMF (radiofrequency electromagnetic field) exposure to the brains of users of all ages, whilst mobile-phone base stations, and base station units for cordless phones, can regularly increase the exposures of large numbers of the population to RF-EMF radiation in everyday life. The need to determine appropriate standards stipulating the maximum acceptable short-term and long-term RF-EMF levels encountered by the public, and set such levels as general guidelines, is of great importance in order to help preserve the general public's health and that of the next generation of humanity.

1. Introduction

Electromagnetic conditions in the environment have changed greatly within the past 15 years. This is in part due to the introduction of mobile telecommunication systems, which have essentially changed the degree of electromagnetic exposure members of the general public are exposed regularly to.

Radiation from mobile-phone communications devices - *and others forms of cordless communications technology* - present completely new electromagnetic exposure regimes for the general population. As examples of this, the daily use of mobile phones is shown to increase RF-EMF (radiofrequency electromagnetic field) exposure to users' brains unless special precautions are taken, and the operation of wireless devices and mobile-phone base-stations can dramatically increase the exposures of large portions of the public to RF-EMF radiation.

The requirement to develop appropriate standards stipulating maximum acceptable short-term and long-term RF-EMF exposure levels for the general public (and it is argued, for vulnerable subsets of the public such as children and pregnant women), and set such levels as general guidelines appears of great importance particularly when technological advances are being made so quickly. Such measures promptly undertaken can help ensure the development of appropriate communications technology

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whilst safeguarding the general public's health and that of future generations. We do not have the right to make mistakes on such a major issue through complacency.

2. Characteristic Conceptions of Russian and Foreign Standards

For the development of appropriate standards that take health and wellbeing into account; it appears necessary to formulate the hygiene hypothesis as follows:

"*The hygienic standards are for the protection of the population, taking into account factors potentially harmful to health, and with the obligation of taking into account typical prevalence of these factors in the general population*" [1].

2.1 International Standards

It is important to consider existing international standards and how these conform to this postulate. Presently international standards are determined by ICNIRP, IEEE, CENELEC and other national and international commissions. The first three organisations mentioned determined the basis for their standards some years ago, and continue to propose RF-EMF guidelines that only take into account thermal, acute and pathological effects [2, 3, 4]. Unfortunately, these RF-EMF standards do little to provide protection for the general population.

With regard to international standards and likely exposures, it is imperative to recognise that the general population is not typically exposed to thermal levels in the workplace or in everyday life. The establishment of a proposed threshold level for pathological effects presently makes the assumption that compensative or adaptive reactions will occur in an organism. However we strongly disagree with this assumption. Whilst people very rarely receive acute exposures in everyday life, all populations in the world have are chronically exposed on a daily basis to low levels of RF-EMF that can cause biological effects and standards have to be set accordingly to take this into account [5].

2.2 National Standards

The RF-EMF exposure levels deemed acceptable vary greatly between countries. As noted in the BioInitiative Report [6] for the RF frequency range of 800-900 MHz, exposure levels range from 4 $\mu W/cm^2$ (0.04 W/m^2) in Switzerland, 6 $\mu W/cm^2$ (0.06 W/m^2) in China, and 10 $\mu W/cm^2$ (0.1 W/m^2) in Russia and Italy to 580 $\mu W/cm^2$ (5.8 W/m^2) in the United States and 5800 $\mu W/cm^2$ (58.0 W/m^2) in the United Kingdom.

2.3 The Russian RF-EMF standards

First of all, it is necessary to provide background information to the reader on the Russian National Committee on Non-Ionizing Radiation Protection (RNCNIRP). The RNCNIRP was created in 1997 at the Russian Academy of Medical Science (RAMS) within the framework of the Russian Scientific Commission on Radiation Protection (RSCRP). The RSCRP acts as the overseer of the RNCNIRP.

The RNCNIRP employs 40 specialists, of whom 38 are qualified scientists, and 2 members are representatives of the Ministry of Health. The RNCNIRP is an independent scientific organisation which does not accept financial sponsorship. Its decisions are thought of as recommendations, and are considered by the Ministry of Health of the Russian Federation when it is setting standards [7].

Mandatory compliance is required with regard to the Sanitary Provisions and Ecological Norms (SanPiN) guidelines set by the Ministry of Health of the Russian Federation. The latest RF-EMF SanPiN 2.1.8/2.2.4.1190-03 (safety standard) on mobile communications was issued by the Ministry of Health of the Russian Federation in 2003. This decreed that the maximum permissible exposure level for RF-EMF over the frequency range of 300 MHz – 300 GHz in the Russian Federation is 10 $\mu W/cm^2$ (0.1 W/m^2). This SanPiN also recommended that:

"*Use of mobile telecommunication devices should be restricted for those under 18 years of age and pregnant women*" [8].

3. Limitations of Present Standards in Russia and Abroad

There are no publications that present ways of extrapolating from the various existing standards recommendations to properly assess real environmental conditions for the population. There are also currently no proposals on how to estimate danger by using existing international standards recommendations: from acute influences to chronic exposure, and from thermal levels to non-thermal levels.

The methodology used to create standards in Russia (and formerly the USSR, the former Soviet Union) uses principles based on additional factors found during actual EMF exposure of the population. These take into account:

- non-thermal levels;
- chronic exposures;
- establishment of 'working levels', instead of 'threshold levels'.

Consideration is also taken into account of the presence of adaptation processes from chronic exposures instead of direct pathological effects.

4. Database for Standardisation

The results of research undertaken in industrial settings from 1950 onwards – almost 60 years of data – and chronic exposure experiments, etc., provide the database used for Russian (and formerly USSR) standardisation. The necessity of developing standards for children as new risk group is also now recognised, as is the need for need for collecting data on how they are affected by typical exposures.

The potential health risk for children is very high and creates a completely new problem we urgently need to address. As noted by the WHO:

"*Children are different from adults. Children have a unique vulnerability. As they grow and develop, there are 'windows of susceptibility': periods when their organs and systems may be particularly sensitive to the effect of certain environmental threats*" [9].

Modern children will generally use mobile phones for a longer overall period than adults of the present generation because they have started to use them at earlier age and will continue use such technology when they become adults. For a variety of reasons it is impossible to use data obtained on adults as an accurate predictor for effects on children. It is therefore necessary to develop standards which take into consideration localised brain exposures as related to age and undertake corresponding research. There are presently no studies investigating the effects of chronic RF-EMF exposure to the brain area which take into account investigation of the possible effects of such exposures in the developing brain an area we hope to address in future work.

5. Thermal and Non-Thermal Health Effects

Presently there is a refusal by many western scientists to accept the possibility of the existence of detrimental non-thermal RF-EMF effects, which in consequence has resulted in an under estimation

of the actual dangers that may exist to the health of the population through different degrees of RF-exposure. However there are a very large number of publications by scientists from both the east and the west documenting biological effects from low levels of RF-EMF.

As examples of this, reference is made to the following: the BioInitiative Report which was authored by 14 respected scientists from five countries (Austria, China, Denmark, Sweden and the USA) [6], the Stewart Report in the United Kingdom [10], and the US National Academy of Sciences National Research Council [11].

Numerous peer-reviewed studies covering non-thermal biological effects have been made by scientists in Russia (previously the USSR) [12-14]. Analysis of 28 biological experiments conducted *in vitro*, *in situ*, and *in vivo* by the present author from 1975 onwards in the former Soviet Union, and later in Russia, using modulated RF-EMF allows the following basic conclusions to be made:

- exposure of biological systems to EMF with higher or lower composite regimens of modulation can lead to the possible development of both physiological and unfavourable biological effects, that are distinct from the biological effects induced by non-modulated EMF;
- acute exposure to low intensities of modulated EMF (at non-thermal levels) can result in development of pathological effects;
- there is a dependence of development of a reciprocal biological response on the intensity and directness of the concrete regimen of EMF modulation; this dependence was fixed at all levels of biological systems — *in vitro*, *in situ*, and *in vivo*;
- as a rule, modulated EMF invokes more recognisable biological effects than continuous EMF regimes.

6. Unsolved Problems in Estimating Future RF-EMF Risk

With the creation of new conditions new potential problems arise:

- Problems of accumulation of effect, remote somatic effects and cancer.
- Problems of adaptation.
- Estimation of the influence of simultaneous exposure to various frequencies.
- Estimation of the role of signal modulation.
- Coordination of the criterion to establish a threshold or appropriate 'working level'.
- Changing reactivity and appearance of electromagnetic hypersensitivity.
- Modulation and biological effects.

Such challenges indicate the benefits of extending research into the biological effects of RF-EMF as early as possible when potential new conditions arise.

7. Guaranteeing Good Health for the Population – A Discussion

The present scientific thinking and basis used in many instances for developing appropriate RF-EMF safety standards does not correspond realistically to modern conditions of RF-EMF exposure as experienced by members of the public (both for generalized exposures and through direct use of mobile communication systems technologies).

- From what we now know, existing safety standards (both foreign and Russian) have become outdated. Modern accumulative RF-EMF exposures have also increased considerably from those found in the past, thereby further increasing likely risk.

- The existing standards cannot guarantee the safe, healthy development of the next generation of humanity.

The viewpoint of the Mobile Manufacturers Forum (MMF) - an international association of radio communications equipment manufacturers – differs from that of ourselves and is as follows:

"*the MMF believes that there is a strong scientific basis for all consumers to have confidence in the safety of mobile phones and base stations. In addition, we fully support parents deciding for themselves whether they want their children to use a mobile phone or not.*" [15].

We make no comment on this large divergence in viewpoint from that of our own researchers and ask you to make your own assumptions as to why there may be such a difference in opinions!

8. Our Conclusions

We propose that it is of the greatest necessity to undertake appropriate detailed research and accumulate suitable knowledge for preparing proper precautionary standards based on the best available scientific evidence at the earliest possible opportunity.

As part of this work it would be advisable to:

- study the possible effects of repeated RF-EMF exposures from mobile phone use (and exposure to RF-emitters) over periods of several years on the brains of children, teenagers and adult users. It is proposed that the childhood studies should monitor subjects from the age of seven onwards;

- develop and undertake new long-term standardization measures, including measures related directly to suitable exposure levels for children;

- put forward more rigid requirements for industries using technologies operating over such frequency ranges;

- actively introduce, and promote, the adoption of *proper* precautionary principles.

The thesis held by some that the present forms of RF communications are absolutely safe is both premature and potentially dangerous. It also holds back the development of more appropriate technologies.

It is necessary to educate scientists, politicians, industries and the general public, including parents and children, that mobile communication devices (and hands-free devices) are not toys, and should be used carefully in a responsible manner. There is no room, or time, for complacency on these matters as related to health, and adopting such measures sooner rather than later could prove highly advantageous to all parties concerned.

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ADD HERE TELECOMMUNCIATION ACTS BILL CLINTON

AND WHAT IT ENABLES THE TELE INDUSTRY TO DO

FURTHER HEALTH RELATED RESEARCH INTO EMF'S

Microwave Electromagnetic Fields Act by Activating Voltage-Gated Calcium Channels: Why the Current International Safety Standards Do Not Predict Biological Hazard

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Abstract:

Microwave and other low frequency electromagnetic fields (EMFs) have been shown to act by activating voltage-gated calcium channels (VGCCs) with most biological effects being due to elevated intracellular calcium, consequent nitric oxide (NO) elevation and either peroxynitrite or NO signaling. This, the role of excessive intracellular calcium in microwave effects and some 20,000 papers on microwave biological effects show that the current international safety standards do not predict biological hazard. Such standards are based on the false assumption that the predominant effects of microwave and other low frequency EMF exposures are due to heating. A whole series of biological changes reportedly produced by microwave exposures can now be explained in terms of this new paradigm of EMF action via VGCC activation, including: oxidative stress; single and double stranded breaks in cellular DNA; therapeutic effects; blood-brain barrier breakdown; greatly depressed melatonin levels and sleep disruption; cancer; male and female infertility; immune dysfunction; neurological dysfunction; cardiac dysfunction including tachycardia, arrhythmia and sudden cardiac death. A two-phase program for greatly improving EMF safety standards is proposed.

Radio frequency radiation increases oxidation levels in the body. Studies conducted on mice and rats Show there's damage to the organs including the hearth and liver 5G is another means of transmitting dangerously high level EMF'S.

JUST BECAUSE EMF'S ARE INVISIBLE DOES NOT MEAN THEY ARE SAFE. THEY ARE EXTREMELY TOXIC TO THE HUMAN BODY.

EMF'S produce health effects in the human body via Voltage Gated Calcium Channels. When the EMF'S hit your body the VGCC are activated.

International and US "Safety Standards" for microwave radiation exposure don't directly apply to devices that fall within the control of the state of Oregon, but because they have often been used to claim safety for state-controlled devices, they are relevant in the way.

These standards are entirely based on the assumption that the only important thing that microwaves EMF's can do is to heat things, like heating food in a microwave oven. They assume therefore that if heating is minimal, we don't need to worry about health effects.

This assumption is false – THERE IS NO BASIS FOR SAFTEY STANDARDS

How do we know that?

1. **Over 20,000 papers in the scientific literature showing biological effects where there should be none.**

2. **It's been known for over 30 years that Pulsed fields are more biologically active than non – pulsed fields.**

3. **We now know what the actual main mechanism is.**

Studies show that EMF’S produce biological responses through the activation of VGCC’S. We know this because if you use a calcium channel blocker which is a drug that’s specific to block these channels it blocks these affects. So, through the studies we know this is the way the biological response was produced.

VGCC’S are in the plasma membranes of the cells. When they are activated they open and calcium flows into the cell, it’s the excess calcium in the cell (Intracellular Calcium) that is responsible for most if not all of the biological responses to EMF’S.

When there's excess calcium in the cell, it increases levels of both nitric oxide (NO) and superoxide. While NO has many beneficial health effects, massively excessive amounts of it react with superoxide, forming peroxynitrite, which is an extremely potent oxidant stressor.

Peroxynitrites, in turn, break down to form reactive free radicals, both reactive nitrogen species and reactive oxygen species, including hydroxyl radicals, carbonate radicals and NO2 radicals – all three of which do damage. Peroxynitrites also do their own damage. All this to say EMFs below a certain frequency are not having a thermal influence; they are not "cooking" your cells as some suggest. (Extremely high frequency would) Rather, EMF radiation activates the VGCCs in the outer cell membrane, triggering a chain reaction of devastating events.

Documented effects of microwave EMF exposure via VGCC'S:

1. Oxidated Stress
2. Single Strand DNA Breaks
3. Double Strand DNA Breaks
4. Cancer
5. Male and Female Infertility
6. Breakdown of The Blood-Brain Carrier (Makes Brain More Susceptible to Toxic Chemicals and Infectious Agents)
7. Loss of Melatonin
8. Sleep Disruption
9. Therapeutic Effects

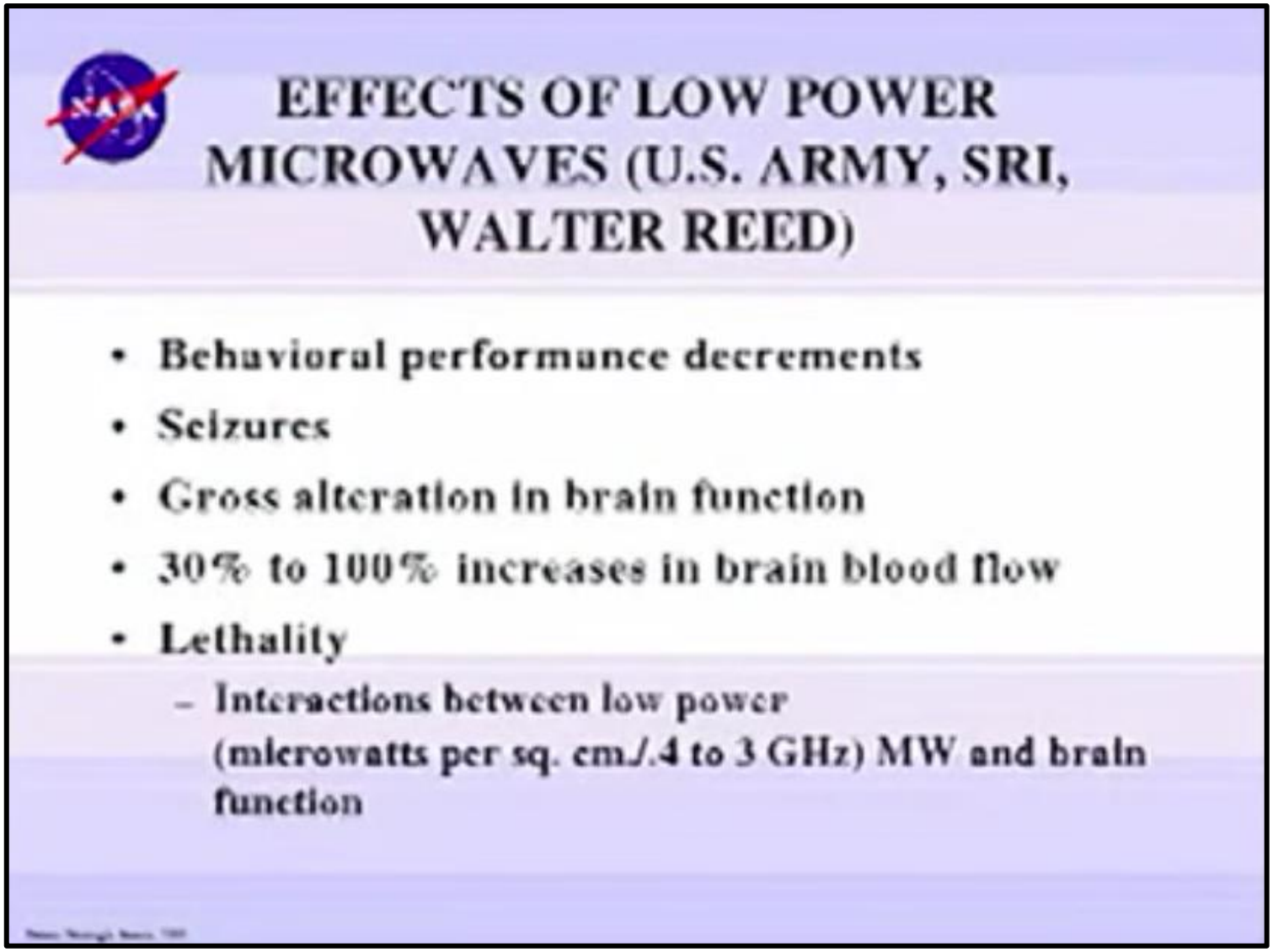
Other Possible Effects from EMF'S via VGCC'S:

1. Various effects on brain function (These are diverse and the literature has not focused on specific effects)
2. Effects on the electrical control in the heart including tachycardia (Rapid Heartbeat) and arrhythmia – (May lead to sudden cardiac death)

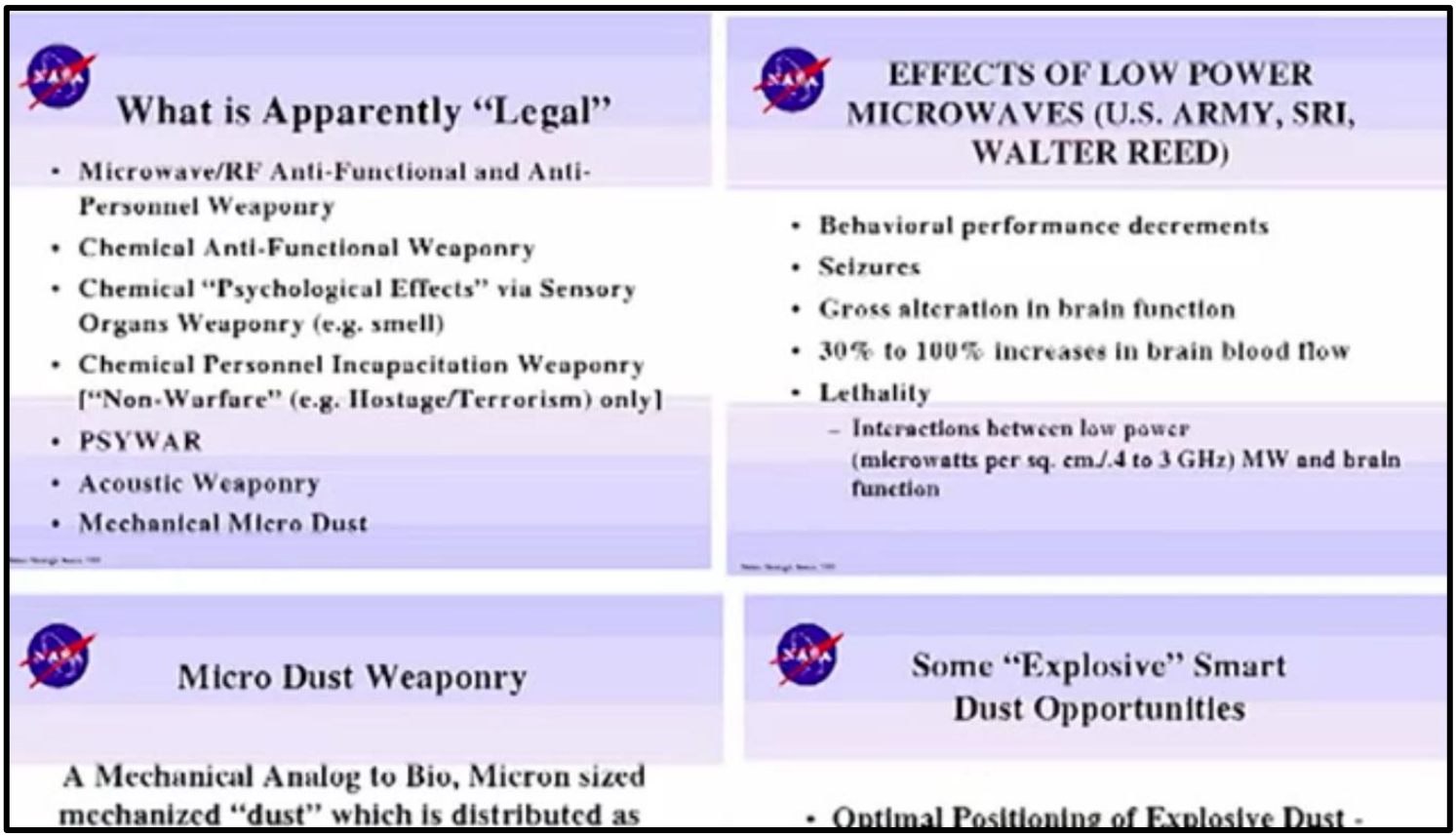
Other Biological Health Implications Documented World Wide From EMF Exposure:

- DNA Single and Double strand breaks
- Oxidative Damage
- Disruption of Cell Metabolism
- Increased Blood brain Barrier Permeability
- Melatonin Reduction
- Disruption to Brain Glucose Metabolism
- Generation of Stress Proteins
- Holes in cell membranes causes calcium leakage, calcium needs to be a low range in the body to do all the things that it does. So that's changing, the calcium inside and outside the cell are no longer in balance because they are leaking out.
- They have done autopsy's on austic kids which shows calcium in balance throughout their brain. EMFS are causing this.
- Oxidation damage – causes havoc throughput the body – It breaks our DNA
- Breaks both single and double strand DNA
- Non – Ionizing radiation breaks our DNA at a slower rate so EMF radiation breaks our DNA at a slower rate as apose to ionzing radiation such as X RAYS

LEAKED NASA DOCUMENT ADMITS EMF CAUSE SERIOUS HARM


EFFECTS OF LOW POWER MICROWAVES (U.S. ARMY, SRI, WALTER REED)
• Behavioral performance decrements
• Seizures
• Gross alteration in brain function
• 30% to 100% increases in brain blood flow
• Lethality
– Interactions between low power (microwatts per sq. cm/.4 to 3 GHz) MW and brain function

The following document was leaked by mistake from an employee at NASA in the year 2000. This is one slide from that document relevant to 5gate discussing Microwaves as weapons.



What is Apparently "Legal"

- Microwave/RF Anti-Functional and Anti-Personnel Weaponry
- Chemical Anti-Functional Weaponry
- Chemical "Psychological Effects" via Sensory Organs Weaponry (e.g. smell)
- Chemical Personnel Incapacitation Weaponry ["Non-Warfare" (e.g. Hostage/Terrorism) only]
- PSYWAR
- Acoustic Weaponry
- Mechanical Micro Dust

EFFECTS OF LOW POWER MICROWAVES (U.S. ARMY, SRI, WALTER REED)

- Behavioral performance decrements
- Seizures
- Gross alteration in brain function
- 30% to 100% increases in brain blood flow
- Lethality
  - Interactions between low power (microwatts per sq. cm./.4 to 3 GHz) MW and brain function

Micro Dust Weaponry

A Mechanical Analog to Bio, Micron sized mechanized "dust" which is distributed as

Some "Explosive" Smart Dust Opportunities

- Optimal Positioning of Explosive Dust -

- **Weapons that are apparently legal? They are talking about weapons hidden somewhere in the civil domain.**

- **Everybody is dealing with them, everybody is using them and one of those weapons is the MICROWAVE.**

- **Microwave is used for mobile phones, smart meters, wireless land connections and the coming 5G CONTROL GRID. We are surrounded by microwaves, they enter our body and we think this is just a side effect of technical applications.**

- **However, NASA classifies Microwaves as a NON – LETHAL WEAPON that is apparently legal. Then they name the effects of those weapons.**

1. **Behavioural Performance Decrements.**
2. **Seizures.**
3. **Grose Alteration of Brain Function.**
4. **30% - 100% Increased in Brain Blood Flow.**
5. **Lethality – Interactions between low power (microwatts per sq.cm/ 4 to 3GHZ) MW and brain function.**

These are weapons brought out on mankind that NASA is openly talking about, they are just projecting it in the paper to the future.

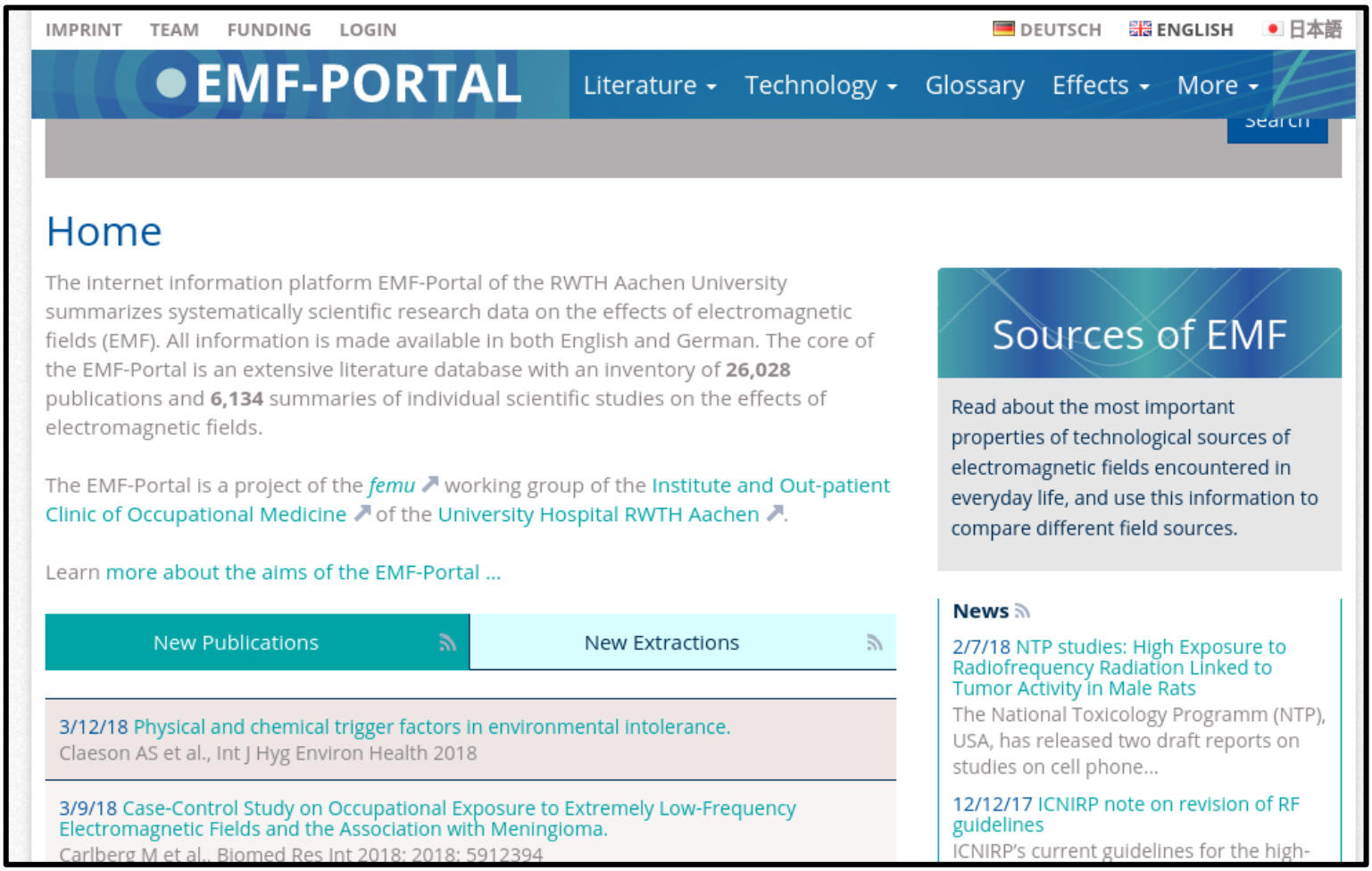
- **They class Microwaves as an “Apparently Legal Weapon”.**

- **They admit they know the serious health implications of Microwaves by labelling the health effects, despite governments and telecommunication companies around the world saying “There is no significant evidence to suggest Microwaves or EMF’S cause any harm”.**

THIS IS A BLATANT LIE.

They also state that Microwaves used at frequency bands 4GHZ – 3GHZ are lethal to the human body. 5G Will operate at 30GHZ TO 300GHZ!

EMF PORTAL FOR DOCUMENTED SCIENTIFIC RESEARCH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The internet information platform EMF-Portal of the RWTH Aachen University summarizes systematically scientific research data on the effects of electromagnetic fields (EMF). All information is made available in both English and German. The core of the EMF-Portal is an extensive literature database with an inventory of 26,028 publications and 6,134 summaries of individual scientific studies on the effects of electromagnetic fields.
The EMF-Portal is a project of the femu working group of the Institute and Out-patient Clinic of Occupational Medicine of the University Hospital RWTH Aachen.
Learn more about the aims of the EMF-Portal ...
New Publications
New Extractions
3/12/18 Physical and chemical trigger factors in environmental intolerance.
Claeson AS et al., Int J Hyg Environ Health 2018
3/9/18 Case-Control Study on Occupational Exposure to Extremely Low-Frequency Electromagnetic Fields and the Association with Meningioma.
Carlberg M et al., Biomed Res Int 2018; 2018: 5912394
Sources of EMF
Read about the most important properties of technological sources of electromagnetic fields encountered in everyday life, and use this information to compare different field sources.
News
2/7/18 NTP studies: High Exposure to Radiofrequency Radiation Linked to Tumor Activity in Male Rats
The National Toxicology Programm (NTP), USA, has released two draft reports on studies on cell phone...
12/12/17 ICNIRP note on revision of RF guidelines
ICNIRP's current guidelines for the high-

5G is a
biohazard
water absorbs
EMF
Stop5G.net
HUMANS ARE 70% WATER!
I'll just leave that with you..

Microwaving the World: The Electromagnetic Energy Pollution

By Daniel Reid, New Dawn Magazine

Science tells us that everything is energy and that matter is nothing more than energy in a different form. Our bodies are a composite of many different energy patterns and vibrations. In fact, the universe and everything in it is made up of different levels of vibration. - Dr. John Veltheim, author & energy therapist, 1992

In traditional medicine, the human energy system (HES) serves as a functional bridge between body and mind, and energy is the therapeutic medium that heal and balances both physical disease and mental malaise.

Today, the HES has come under intensive attack from an entirely new phenomenon which the human system has never before had to face.

This new threat to human health and longevity is the rapidly growing hazard of electromagnetic “energy pollution.”

Since the industrial revolution and the subsequent electronic age, the earth’s electromagnetic energy environment has become intensely polluted with artificial electromagnetic fields (EMF), unnatural radio frequencies, microwave radiation, nuclear radiation, and many other forms of aberrant energy that cause severe deviations and imbalances in the HES.

Today, there are 250 million times more artificially generated radio frequencies in the earth's atmosphere than there were in 1930. These invisible but highly reactive energy waves and artificial EMF from high-voltage power lines, transformers, and home appliances have become the big unknown factor in all the vital equations of human health, and they constitute the hidden cause in many common human ailments, from cancer to schizophrenia.

This pollution of our energy environment is even more hazardous to the human system than chemical and ecological pollution, and it calls for an entirely new approach to healing, an approach that effectively protects the HES from distortion by artificial energies and EMF and cures the conditions they cause.

Let's take a quick look at some of the most widespread and hazardous forms of electro-magnetic energy pollution on the earth today. High-voltage alternating current power lines and transformers, which operate at 60 hertz, create an artificial EMF of 100 milligauss extending 20 meters around them.

At a range of 30 centimetres from the human body, 3 milligauss has been determined to be the level of exposure to EMF above which cancer and brain damage can occur.

As Dr. Robert Becker, one of the world's leading authorities on energy medicine, writes in his book Cross Currents:

"At this time, the scientific evidence is absolutely conclusive: 60 hertz magnetic fields cause human cancer cells to permanently increase their rate of growth by as much as 1,600 percent and to develop more malignant characteristics."

The two types of human tissue most seriously damaged by artificially generated EMF are brain tissue and rapidly developing tissues, such as those in growing children, because these tissues display the most electrical activity and are therefore most strongly affected by external EMF.

Common household appliances produce artificial EMF that brings energy pollution straight into your own home and expose every member of the family to danger.

Electric blankets create fields of 50-100 milligauss, far above safe levels, and pregnant women who use them are known to experience a far higher than normal rate of miscarriage.

Electric razors operated from a plug-in power line generate highly hazardous fields ranging from 200-400 milligauss, a risk to the brain behind the beard that's hardly worth the "convenience" of not having to use shaving cream and a razor.

A 10-watt fluorescent light tube produces an artificial EMF that is twenty times stronger than an ordinary 60-watt bulb, and in offices and school rooms lit by multiple banks of fluorescent tubes, everyone in the room is exposed to aberrant EMF far above the level of safety for human health.

Electric hair dryers produce a harmful field of 50 milligauss at six inches, and this factor is suspected as the cause of the abnormally high rate of breast cancer among professional beauticians and hair dressers, who operate these devices all day only inches from their chests.

At 30 cm, an electric stove will expose you to an EMF of 50 milligauss, far above the 3 milligauss safety limit, so if you do a lot of cooking at home, it's much safer to use gas. The list goes on an on, but by now you probably get the picture.

All of these artificial energy fields and unnatural energy frequencies to which humans are today routinely exposed also catalyse extremely harmful reactions between toxic chemical pollutants and natural biochemicals within the human body.

These reactions create all sorts of noxious poisons in the tissues, and have extremely strong acid-forming effects in the bloodstream and other bodily fluids, thereby upsetting the all-important natural pH balance in the blood and tissues and causing a state of chronic acidosis. Acidosis of blood and tissues is a primary pre-condition for the development of all cancers.

Despite the proven risk of exposure to artificial EMF over 3 mG, very few countries have legislated legal limits to the EMF produced by machines and appliances at home and in offices and factories.

In Sweden, there are strict laws prohibiting EMF exposure to humans above 2.5 mG, and in Russia, where this hazard has been extensively researched, the limit is an even safer 1.5 mG. Compare that with the legal limit of 1,000-5,000 mG exposure to EMF for people in homes, offices, and schools in Australia, and similar hazardous levels in America, Canada, and the UK, as well as most of Asia.

Small wonder that one in three people today develop some form of cancer, and that brain disorders and mental malaise have become rampant throughout the world.

The Global Microwave “Oven”

Brain tumours have also been conclusively related with microwave pollution, and the worst offenders here are wireless cell phones, which drive a powerful beam of microwave radiation straight into the brain.

Recall that during the Cold War, the Soviet Union beamed microwaves at the American Embassy in Moscow from a rooftop across the street, and as a result, one American ambassador and several staff members developed cancer.

The level of microwave radiation they used for that purpose was less than that at which an ordinary household microwave oven operates.

Here's what Dr. Robert Becker has to say about microwaves:

"The scientific data at this time indicate that microwaves have major biological effects at power levels far below those required to cause heating [such as microwave ovens].

"The majority of these effects are productive of various disease states, primarily cancer and genetic defects, in those exposed and in their unexposed offspring...

"The hazard comes from the fact that exposure to microwaves, like exposure to any abnormal electromagnetic field, produces stress, a decline in immune system competency, and changes in the genetic apparatus. Thus, the levels of exposure that the government says are 'safe' are in fact not safe at all."

Think about that next time you receive a call on your cell phone or heat up a pizza in a microwave oven!

The human body, particularly the electrically active brain, is extremely sensitive to disruption from the high-frequency electromagnetic radiation produced by cell phones and cell phone transmission towers.

Our brains and bodies depend on hundreds of delicately balanced, internally generated electrical impulses to conduct the vital functions of life, and these are thrown into disarray by the invasive ultra-high frequencies generated externally by cell phones and phone towers.

As Blake Levitt states in his book Electromagnetic Fields,

“When it comes to mobile phones, a worse frequency could not have been chosen for the human anatomy.” Researcher Carolanne Patton has found that “the brain reaches peak absorption in the UHF bands, right where cellular (mobile phone) telecommunications operate.”

Since the advent of cell phones, there has been a 600% increase in automobile accidents among drivers who use these devices, and this alarming rise in road fatalities and injuries is not due to the “distraction” of speaking on a cell phone. It’s due to impairment of brain function and nerve response while such phones are being used.

Tests conducted by the US Department of Energy found that:

“Using mobile phones impairs memory and reaction times. ‘Hand-free’ mobile speakerphones cause even more crashes because they typically emit 10-times more brainwave interference than handheld units.”

This elevation of intensity is due to the metal frame of the car, which amplifies the field frequencies produced by cell phones and speakers used in automobiles.

A University of Toronto study concludes that:

“The heightened probability of crashing your car persists for up to 15 minutes after completing a call,” and Dr. Chris Rumball of the B. C. Medical Association notes, “This is comparable to driving while dead drunk.”

One of the leading experts on cell phone hazards was the late biophysicist Dr. Neil Cherry of Lincoln University in New Zealand, where mobile phone towers are prohibited on school grounds due to their hazardous influence on human health, particularly the rapidly developing nervous systems of children.

His research showed accelerated aging, rapid cell death, and an increase in cancer rates caused by microwave radiation from cell phones and phone towers.

He warned that frequent exposure to these frequencies disrupt the delicate balance of the brain's electro-chemical communications and can result in chronic headaches, fatigue, lethargy, nausea, dizziness, depression, arteriosclerosis, and possibly Alzheimers.

"There is also a higher incidence of cardiac problems," states Dr. Cherry. "It has now been shown in many studies that mobile phone users get more heart attacks and more heart disease."

He also discovered that the imbalances in the brain of essential minerals such as calcium, various trace elements, and neurotransmitters such as serotonin caused by mobile phones can easily alter moods and result in depression, suicide, rage, and violent behaviour.

Another scientist who has issued public warnings about the hazards of mobile phones is Dr. George Carlo, who found that rare types of brain tumours have more than doubled among mobile phone users, particularly on the side of the head where they use their phones.

“Mobile phones cause genetic damage leading to cancer,” states Dr. Carlo bluntly, and he recommends “prudent avoidance” of these devices after finding that every type of mobile phone tested exceeded US Federal Communications Commission’s own standards for EMF absorption rates.

Dr. Carlo notes that:

“The more a person uses a mobile phone, the more cellular destruction and health risks they incur. Mobile phone confused cells can go crazy. Experiments on captive animals show that this cumulative DNA damage is passed on to succeeding generations.”

A study conducted at Adelaide Hospital in Australia confirmed Dr. Carlo’s conclusions when it demonstrated a doubling in the rate of B-cell lymphoma cancer in mice after 18 months of only one hour exposure daily to the frequencies used in mobile phone technology.

Studies conducted by Dr. Peter French in Sydney, Australia, show that:

“Cells are permanently damaged by mobile phone frequencies and inherited unchanged, from generation to generation.”

Since the introduction of mobile phones, metropolitan Sydney has experienced a 25% increase in the incidence of asthma and a 5% increase in asthma related deaths.

Dr. French found that:

"The production of histamine, which triggers broncial spasms, is nearly doubled after exposure to mobile phone transmissions. Mobile phones also reduce the effectiveness of anti-asthmatic drugs, and retard recovery from illness."

One of the most disturbing effects of exposure to mobile phone transmissions is the disruption of the delicate protective mechanism known as the "blood brain barrier," which is designed by nature to prevent toxins and other dangerous substances from entering the brain from the bloodstream.

Professor Leif Salford stated to the Daily Mail his finding that after a two minute conversation on a mobile phone,

“It seems that molecules such as proteins and toxins can pass out of the blood, while the phone is switched on, and enter the brain. We need to bear in mind diseases such as MS and Alzheimers, which are linked to proteins being found in the brain.”

The accumulation of toxic residue in the brain due to the malfunction of the blood brain barrier caused by exposure to radiation from mobile phones and phone towers can also lead to the formation of tumours in the brain, which then grow even faster than normal as a direct result of exposure to abnormal EMF, as noted above by Dr. Robert Becker.

You don’t even have to be using your cell phone to receive or make a call in order to suffer serious damage. In one hospital in Australia, nurses noted a direct correspondence between which side of the body kidney cancer occurred in patients and which side of the body they habitually wore their cell phones on their belts.

Men who carry cell phones in their front pockets run the risk of sterility, impotence, and even testicular cancer, and women who keep mobile phones in their pockets risk the same problems with their ovaries.

As EMF researcher Dave Ashton states:

“Because mobile phones constantly search for the nearest repeating tower, long-term damage comes from mobile phones in the stand-by mode.”

And if you think the analogy of a global microwave oven is an exaggeration, then consider this: if you place a mobile phone on stand-by mode in the cavity of a fresh raw chicken and leave it there for about three days, the microwave radiation from the phone will cook the chicken.

The telecommunications industry is trying very hard to prevent these facts from coming to light in order to protect what has become a $50 billion dollar a year industry.

But the scientific research is conclusive: artificial electromagnetic fields, microwave radiation from cell phones, and transmissions from phone towers pose a serious hazard to human health and cause particularly serious damage to the brain and immune system.

There are only two ways to avoid these serious threats to your health and longevity: either stop using these high-frequency electronic devices, or else start using high-tech devices which are designed to transform harmful EMF and microwave radiation into harmonious patterns which are compatible with the bioelectric energies of life.

By Daniel Reid, New Dawn Magazine;

7 Ways EMF Technology Seriously Threatens Entire Populations

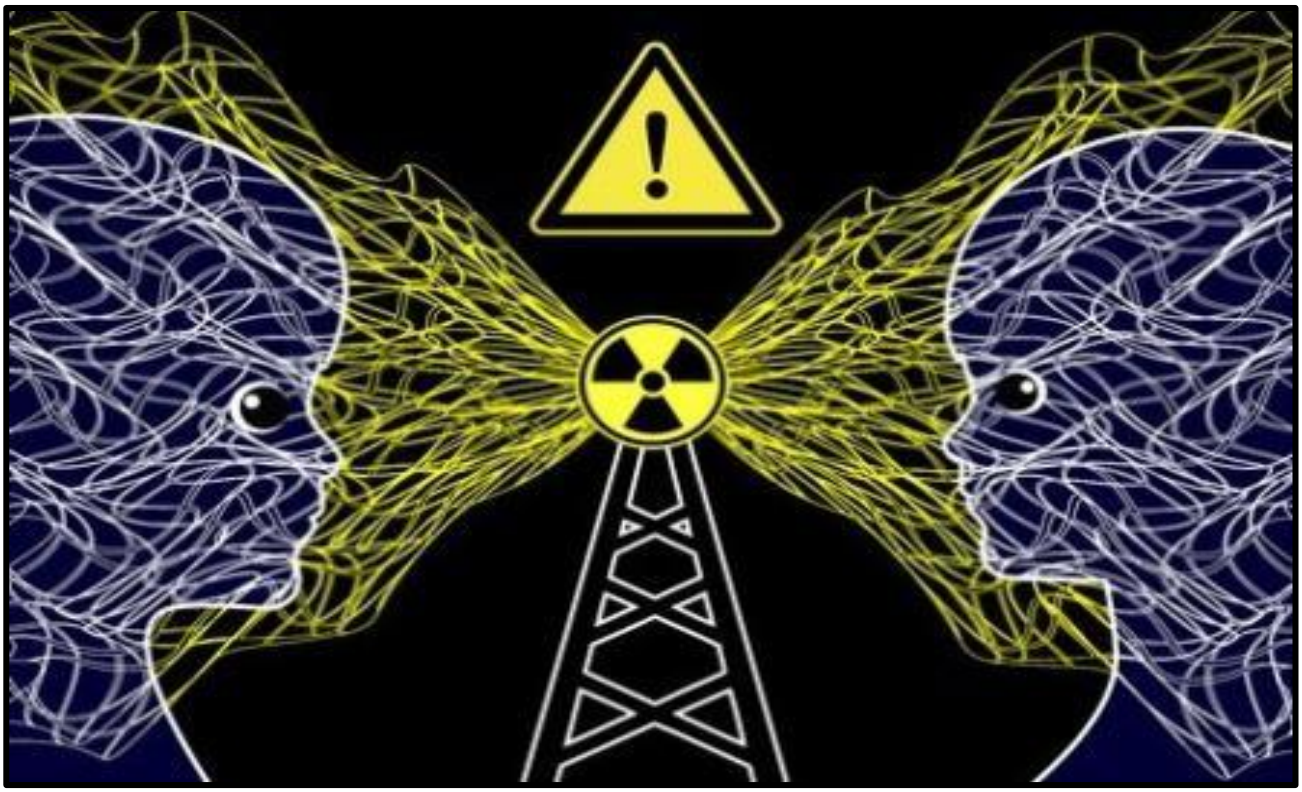
By Paul A Phillips

Recently, over 180 medics and scientists sent a document to the European Union appealing for the suspension of the new 5G EMF technology planned to roll out. Essentially, the 11 page document warns that EMF technology is a serious environmental hazard, harmful to life.

That the new 5G EMF technology has not been properly tested for safety and has been blindly approved without health evaluation. The medics and scientists call for a proper health evaluation and while being carried out a suspension of the 5G.

However, the unconditional push for EMF technology continues. The push involves a number of individuals, particularly those in high places, biased and blinded by money or the want for control, only seeing the EMF technology's advantages.

Flawed ideology and insanity ensues



In reflection of this, if allowed to continue uncontested, here are 7 ways by which EMF technology seriously threatens not just the health and life of humans, but also endangers the existence of non-human populations through upsetting the delicate balance of life.

Remember, without nature's delicate and intricate balance we will cease to exist.

1. Invisible nature of EMF's

Because of the invisible ubiquitous nature of EMF exposure, unable to see its effects, it has been met with relatively little protest from the people. Further, as with smoking, we have seen many cases of cover-up and denial of the evidence linking EMF's to disease such as cancer. It doesn't help that there are long latency periods before any noticeable harm kicks in. Electrosensitivity – the reactions to EMF signals are many, making it difficult for doctors to diagnose, as symptoms are so diverse.

2. Cell phone usage and cancer

A number of us know that the mainstream media has been covering up the fact that there is a link between frequent long-term cell phone usage and cancer. The mainstream media don't want to expose their major sponsors the cell phone industry on this matter.Then there are the cell phone industry's sponsored research establishments, deliberately designed to whitewash the industry with biased, false scientific claims that there is no link to cancer.

Thus, both the mainstream media and the cell phone industry have done very little to protect its users. The same applies to users of other wireless applications in conjunction with the antennas or cell masts all operating on the harmful EM frequencies in the network.

Cancer link

A substance called melatonin is secreted by the pineal gland located at the base of the brain. Melatonin is an extremely powerful antioxidant. As with all anti-oxidants is has the effect of mopping up potential cell-damaging free radicals in the body.

Thus, it plays a major role in cell repair; body rejuvenation and disease prevention. Melatonin is produced during sleep and herein lays the problem:

Night time and sleep serve as a signal for the pineal gland to produce melatonin, but EMF's suppress the production. The pineal gland can't tell the difference between natural light and EMF waves.

Bathing in a sea of ubiquitous EMF's waves, with the pineal gland unable to detect night time leads to a lack of melatonin production and immunological protection. In the long run this may lead to disease such as cancer.

3. Other Diseases

Not just cancer, the melatonin deficiency may lead to other serious illnesses such as heart disease. Indeed, we need to understand this and take the necessary precautions.

For example, at least keep your wireless application at a distance from your body during sleep… (More on illnesses through EMF's and precautions to follow).

4. Schumann resonance and circadian rhythms

The Schuman resonance frequency (7.83Hz) has been described as the Earth's universal magnetic pulse. An experiment by Professor R.Wever showed that when subjects were kept underground and isolated from the Schuman resonance frequency, after a while, they developed a whole range of nervous, hormonal and behavioural problems.

What's this got to do with EMF's? EMF's and the related wireless technology interfere with the Schumann resonance and the body's natural circadian rhythm.

When coming out of the underground, receiving the Schumann resonance again, the subjects became well. In humans, brain alpha waves are virtually identical to the Schuman resonance, needed for healthy function.

EMF pollution also interferes with the circadian rhythms of plants and animals.

5. Bee colony collapse disorder

As well as humans, animals and insects are sensitive to electromagnetic frequencies. Besides pesticides, it has been said that another major explanation for the large drop in bee populations in many countries is that the EMF technology interferes with the bee's own sensory electromagnetic frequencies used in its navigational system.

This has been proven experimentally by Dr John Kuhn. He found that when cell phones were placed at hives far fewer bees returned than normally over recorded time intervals. Placing a cell phone at one of the hives had the effect of NO returning bees.

The bees could not navigate their way back to the hives due the cell phone's interference with their navigational system.

Roughly 70% of the world's crops are pollinated by bees. Consider the dire consequences of EMF pollution on the bee population if this insect is not around to play its vital role in pollination, affecting the food chain and seriously upsetting the balance of nature.

6. Cryptochromes

Not just bees, but in animals, EMF's disrupt the navigational ability by affecting cryptochrome cells present in the eye. The cryptochrome cells give insects and animals the ability to physically see changing energy waves located for flight guidance.

For example, the lowest intensity of EMF's can disrupt the cryptochrome cells in birds and their ability for flight guidance during migration.

Butterflies have this biological compass and their navigational system is also affected by the EMF's. Consequently, the bird, bee, butterfly and other insect populations have declined.

6. Lack of acknowledgement to hypersensitivity

The harmful effects of EMF technology are confounded by a lack of acknowledgement, funding and research by independent scientists not having industry ties.

The WHO (Word Health Organization) as with other agencies acknowledges the dangers such as the potential carcinogenic effects, but more research is desperately needed on electromagnetic hypersensitivity.

The results from this research can be used to not only expose the industry related biased science, moneyed self-interests and unethical, immoral reckless disregard for health, but also establish the vital and necessary precautions needed.

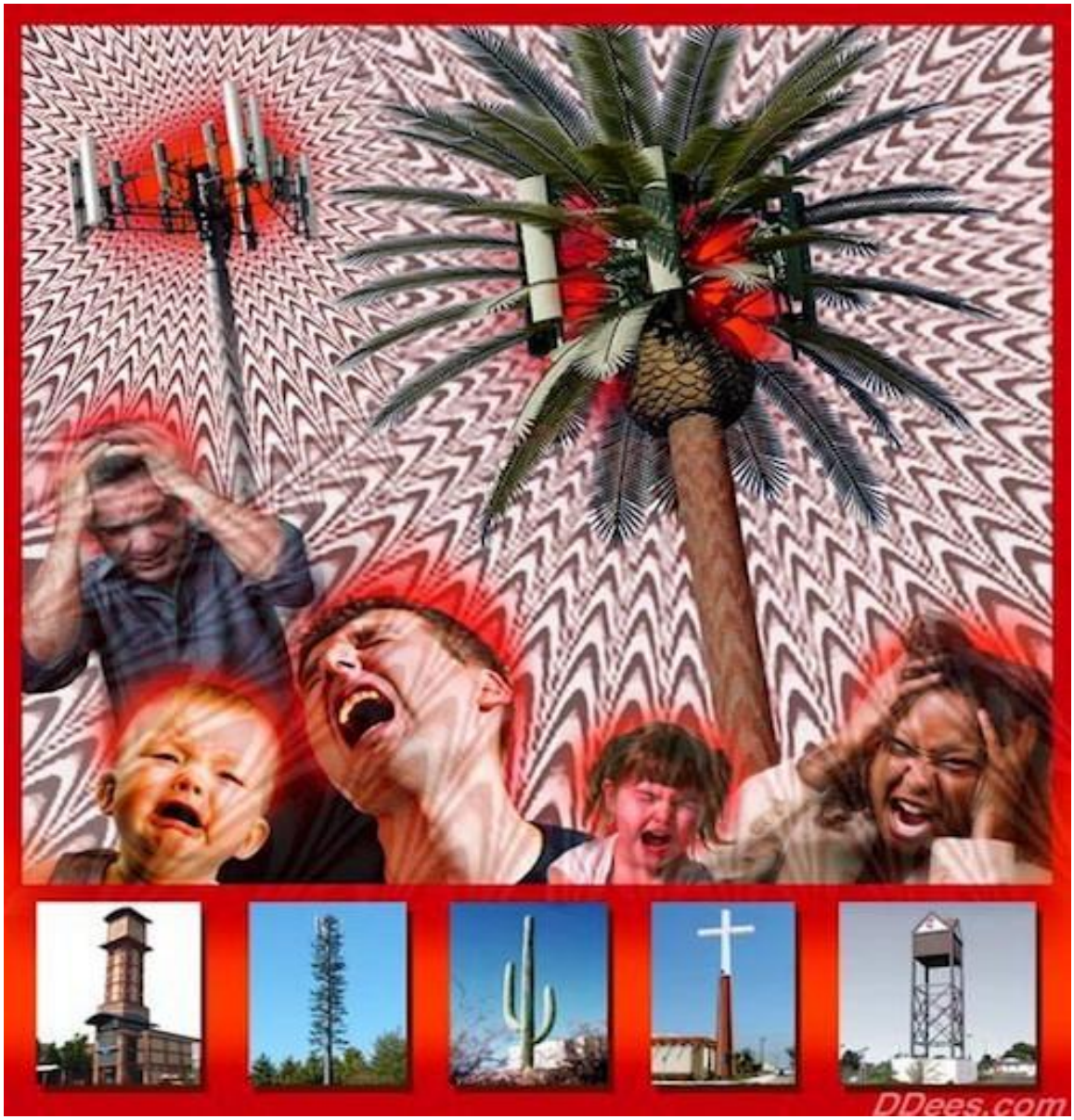
Finally

Once again, as with so many things we are facing in this end-game scenario, one positive action we can all take is to stop cooperating. Refuse to have a 'smart meter' (dumb meter) installed, stop using the EMF applications. At least don't give these applications to your children.

The new 5G, if allowed to roll out, is a health crisis waiting happen and the harmful ubiquitous EM frequencies produced will be everywhere. Get campaigning in any way you can to raise public awareness so that something can be done.

Do it not just for the future of you, your family and friends, but for the life of entire non-human populations, before it's too late.

FREQUENCY



The Earth vibrates at a frequency around 7.83Hz. Wireless radiation in the Mhz – Ghz and Thz is literally millions, billions and trillions times the normal frequency of the earth. ALL LIFE FORMS, HUMANS, ANIMALS AND THE ENVRIOMENT WILL SUFFER!

Source – humansarefree.com

Human skin and sweat ducts are antennae and can be influenced (Controlled) by 5G Technology. If you think its farfetched to connect 5G and the IOT with the control grid, consider the latest evidence.

Do you know that our skin (The largest organ in our body) directly responds to 5G? Are you aware that our sweat ducts act as antennae?

Do you know that our sweat ducts can receive signals? We are energetic beings, first and foremost.

We vibrate and exude frequencies. To affect people energetically is to affect them physically.

Some people in the mainstream may have been shocked to discover the extent of CIA spying on their lives, but that is truly the tip of the iceberg.

If the technology already exists to affect, influence and (as we will learn) control the human frequency field and energetic structure, how close are we already to technological slavery?

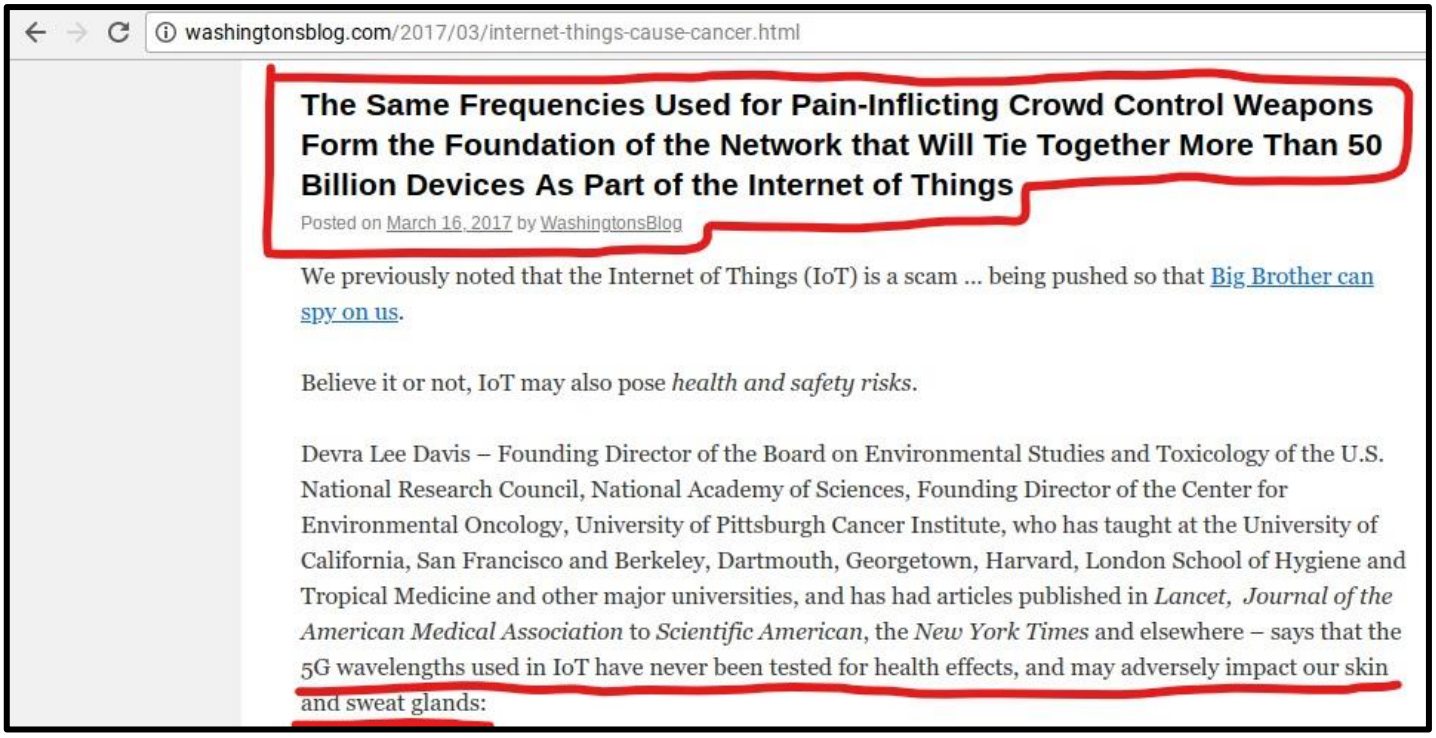
Consider the findings by Israeli scientist DR. Ben-Ishai.

- **The 5G frequencies will zap us with wavelengths that will interact with the geometrical structure of our skin.**

- **In 2008 we found that sweat ducts work like helical antennas. The sweat duct was an integral part of the mechanism for the absorption of energy, electromagnetic, between 75-100GHZ, and that if you changed the character of the sweat duct, IE made it work, you could actually change the absorption at some point, and if you could do that you could trace how a person is under stress.**

- **Gal Shafirstein also came to the same conclusion, he actually looked at SAR rates as well. He did this because the American army had commissioned him to explain why their 94Ghz crowd dispersal gun made people run away when the beam touched them. (DIRECTED ENERGY WEAPON) If you are unlucky enough to be standing there when it hits you, you feel like your body is on fire. He found the SAR rate was going very high within the sweat duct compared to the surrounding tissue, so there's already evidence that there could be effects on us.**

- **Microwaves affect water in a different way to more solid matter. Essentially, as Washington's blog notes, the Same Frequencies Used for Pain – Inflicting Crowd Control Weapons Form The Foundation of the Network that Will Tie Together More Than 50 Billion Devices As Part of the Internet of Things.**


washingtonsblog.com/2017/03/internet-things-cause-cancer.html
The Same Frequencies Used for Pain-Inflicting Crowd Control Weapons Form the Foundation of the Network that Will Tie Together More Than 50 Billion Devices As Part of the Internet of Things
Posted on March 16, 2017 by WashingtonsBlog
We previously noted that the Internet of Things (IoT) is a scam ... being pushed so that Big Brother can spy on us.
Believe it or not, IoT may also pose health and safety risks.
Devra Lee Davis – Founding Director of the Board on Environmental Studies and Toxicology of the U.S. National Research Council, National Academy of Sciences, Founding Director of the Center for Environmental Oncology, University of Pittsburgh Cancer Institute, who has taught at the University of California, San Francisco and Berkeley, Dartmouth, Georgetown, Harvard, London School of Hygiene and Tropical Medicine and other major universities, and has had articles published in Lancet, Journal of the American Medical Association to Scientific American, the New York Times and elsewhere – says that the 5G wavelengths used in IoT have never been tested for health effects, and may adversely impact our skin and sweat glands:

Ben – Ishai finishes his talk by saying that, within a matter of 2 years, we shall all be flooded with 5G and it will be affecting our skin and sweat ducts – regardless of the health effects.

He highlights that the current standards to not consider the SkinRad Effect (skin radiation effect) when assessing possible health risk issues, which is just like how the wireless industry clings to their outmoded idea of SAR (a thermal measure of wireless radiation) and ignores the damaging, non – thermal effects of wireless radiation.

The Environmental Health Trust had a lot to say about 5G:

The use of sub – terahertz (Millimetre Wave) communications technology (Mobile phones, WiFi, Network transmission antennas) could cause humans to feel physical pain via nociceptors, stated Dr Yael Stein, MD, who wrote a letter to the Federal Communications Commission about 5G frontiers.

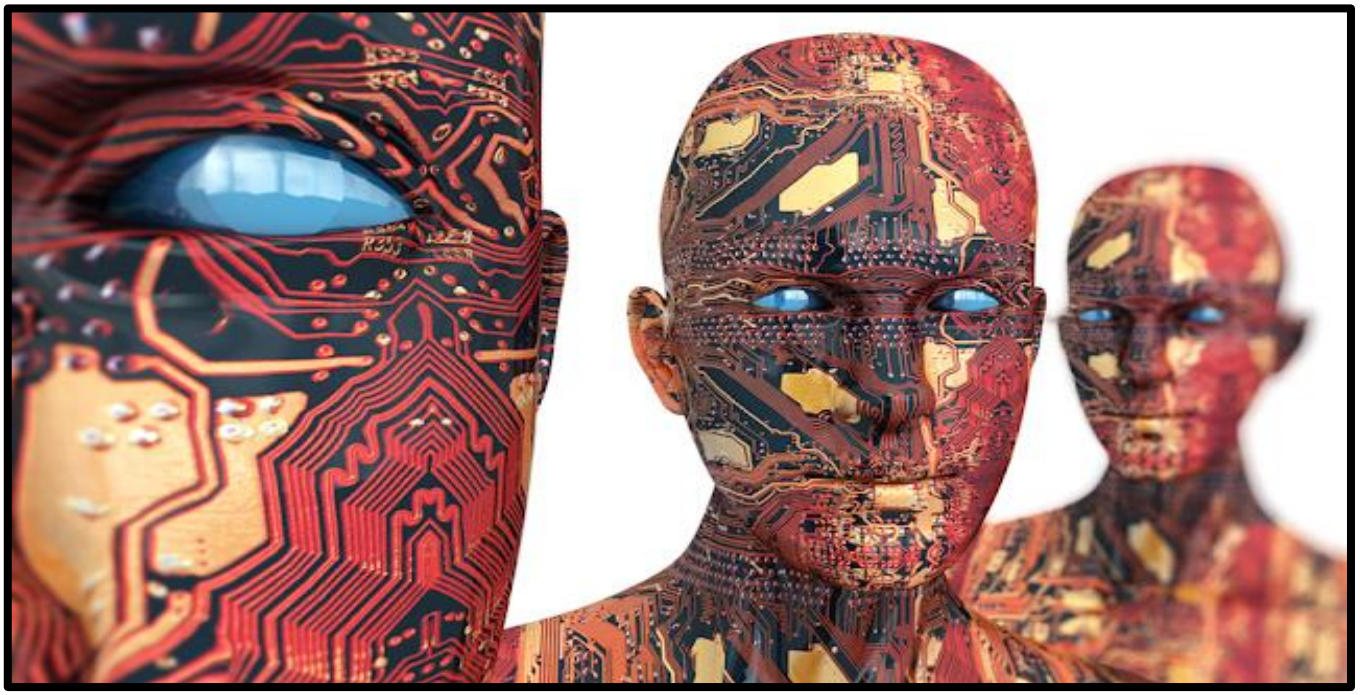
THINK ABOUT IT

OUR NATURAL RHYTHM IS SOMETHING CLOSE TO THE SCHUMANN RESONANCE OF THE EARTH, WHICH IS 7.83HZ. WE ARE TALKING ABOUT FREQUENCY BANDS NOT HUNDEREDS, NOT THOUSANDS, NOT MILLIONS, BUT ACTUALLY BILLIONS OF TIMES THIS FREQUENCY.

28 GHZ IS 28,000,000,000 (28 BILLION) CYCLES PER SECOND! NOW WE HAVE ELECTRONIC DEVICES THAT OPERATE IN THE THZ BAND. (TERAHERTZ WHICH IS TRILLIONS OF HERTZ)

TO SAY THIS IS COMPLETELY UNNATURAL IS THE UNDERSTATEMENT OF THE MILLENIUM. IT IS COMPLETELY OUT OF BALANCE, DISHARMONIOUS AND INSANE. IT IS WREAKING HAVOC ON OUR ENERGY FIELDS AND THE PLANETS NATURAL DIVINE RHYTHM.

TRANSHUMANISM

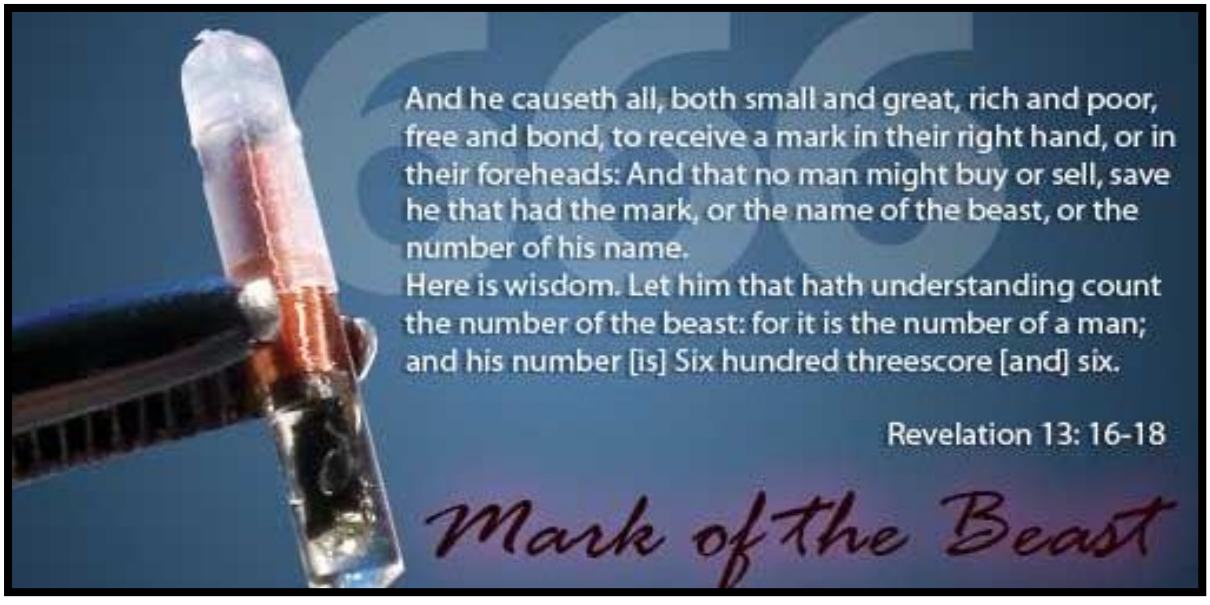


Transhumanism is the process of merging man with machine. If you have never had a spiritual awakening or know anything about what it means to be a divine human being then you probably think transhumanism is a “cool” thing to do.

Transhumanism is physical, mental, emotional and spiritual enslavement. If you allow society to condition your mind and turn you into a transhuman then you lose the very essence of what it means to be human.

The first step of becoming transhumanism is getting any form of Radio Frequency Identity Tag (RFID) chip implanted into your body.

RFID chips can send and receive signals and can literally make a prison for your mind. As previously discussed this dark sinister agenda has already been prophesised in biblical prophecy.


And he causeth all, both small and great, rich and poor, free and bond, to receive a mark in their right hand, or in their foreheads: And that no man might buy or sell, save he that had the mark, or the name of the beast, or the number of his name.
Here is wisdom. Let him that hath understanding count the number of the beast: for it is the number of a man; and his number [is] Six hundred threescore [and] six.
Revelation 13: 16-18
Mark of the Beast

I had a spiritual awakening about 6 years ago which I will explain in greater detail in another presentation. For now, I will explain what I know in regards to spiritual awakening in comparison to transhumanism and how it is really designed to enslave your physical body and possibly the soul.

The original divine angelic humans were created to be the guardians of the centre of the universe, earth. Humans are angels in physical form. Originally humans were born with 12 strands of DNA active. If you look at humans today we still have the original 12 strands but we only have 3-4 strands currently activated.

Something happened in the history of our planet where our DNA was unplugged and we digressed in consciousness from our original divine potential down to 3-4 strands of DNA being activated.

So, the question needs to be asked… What is a human with 12 strands of DNA really capable of?

Science will tell you this is junk DNA. All you have to do is look at nature to discredit this statement. If the unplugged strands of DNA didn't have a purpose they wouldn't be there, plain and simple. But they are, with proves they do have purpose.

When you meditate you actually build your DNA over time. This is why Buddhist monks go into isolation and meditate to become one with their spiritual self and gain spiritual mastery.

When you build your DNA and reactive your strands you become capable of things such as telekinesis (moving objects with your mind), levitation (as seen by monks), physic powers and many other what would be deemed paranormal or supernatural abilities.

The possibilities are endless of what you can achieve if you rebuild your DNA back to a divine angelic human. So how is this related to transhumanism?

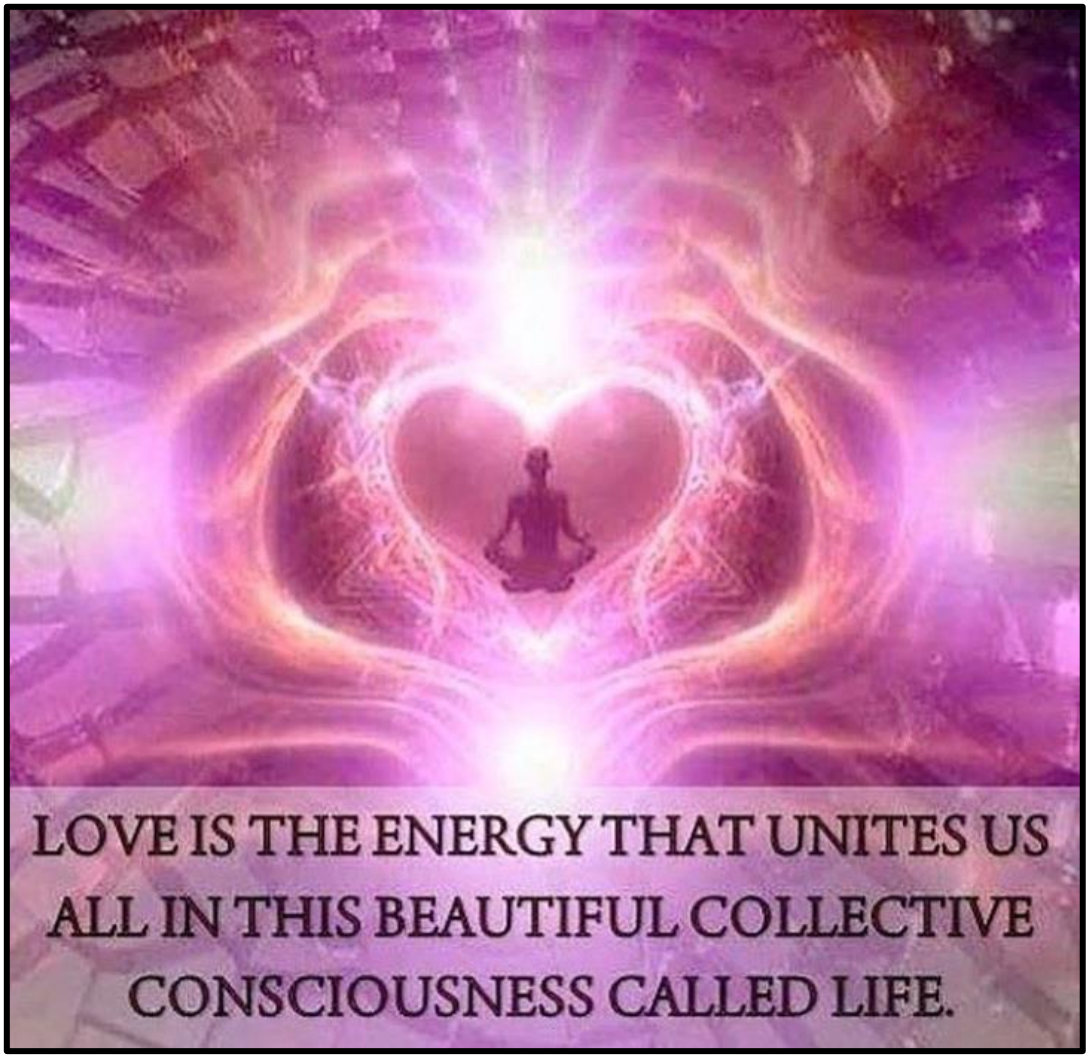
Simply put…

The powers that be do not want you to understand your spiritual heritage of what it means to be a divine angelic human.

They would rather you not understand who you are, where you came from or why you are here. They would rather you accept the digital ascension into transhumanism then the spiritual ascension into your own sovereignty, divinity and birth right.

They want you to continue to pay your taxes, keep your dumbed down, not asking questions, not questioning their authority, believe their propaganda and continue to be a slave to the system and eventually enslave yourself with transhumanism.

If you would like to learn more about spiritual awakening I will be discussing my own personal spiritual awakening experience and the knowledge I have acquired over the years in an upcoming presentation.


LOVE IS THE ENERGY THAT UNITES US
ALL IN THIS BEAUTIFUL COLLECTIVE
CONSCIOUSNESS CALLED LIFE.

THE SYNTHETIC AGENDA

The SYNTHETIC AGENDA is the over-arching agenda of the New World Order worldwide conspiracy.

Conspiracy Definition

1. **A secret plan by a group to do something unlawful or harmful.**
2. **The action of plotting or conspiring.**

Think about it – so many aspects of the conspiracy are about supplanting the real with the fake, the organic with the inorganic, the carbon with the silicon and the biological with the artificial.

In the synthetic agenda, everything in our world is being threatened with replacement by an inferior version or fake replica of itself – which sells itself as superior so as to increase the acceptance and assimilation of it.

As I covered in the series Everything is Fake: Top 40 Pieces of Fakery in Our World (part 1, part 2, part 3 and part 4), almost everything around us is a facade, fake or fraudulent.

For instance, we have vaccines, petrochemical drugs and radiation masquerading as "medicine", foreign corporations masquerading as "government", mainstream science masquerading as "knowledge", GMOs masquerading as "food" and fiat paper masquerading as "money".

However, as David Icke in Phantom Self has been saying, the deeper reason is that all these fake things are being created from some sort of virus or distorted force that has hacked the source and digital-genetic code of life itself – and is madly spewing out an inferior version of everything in the only way it knows how.

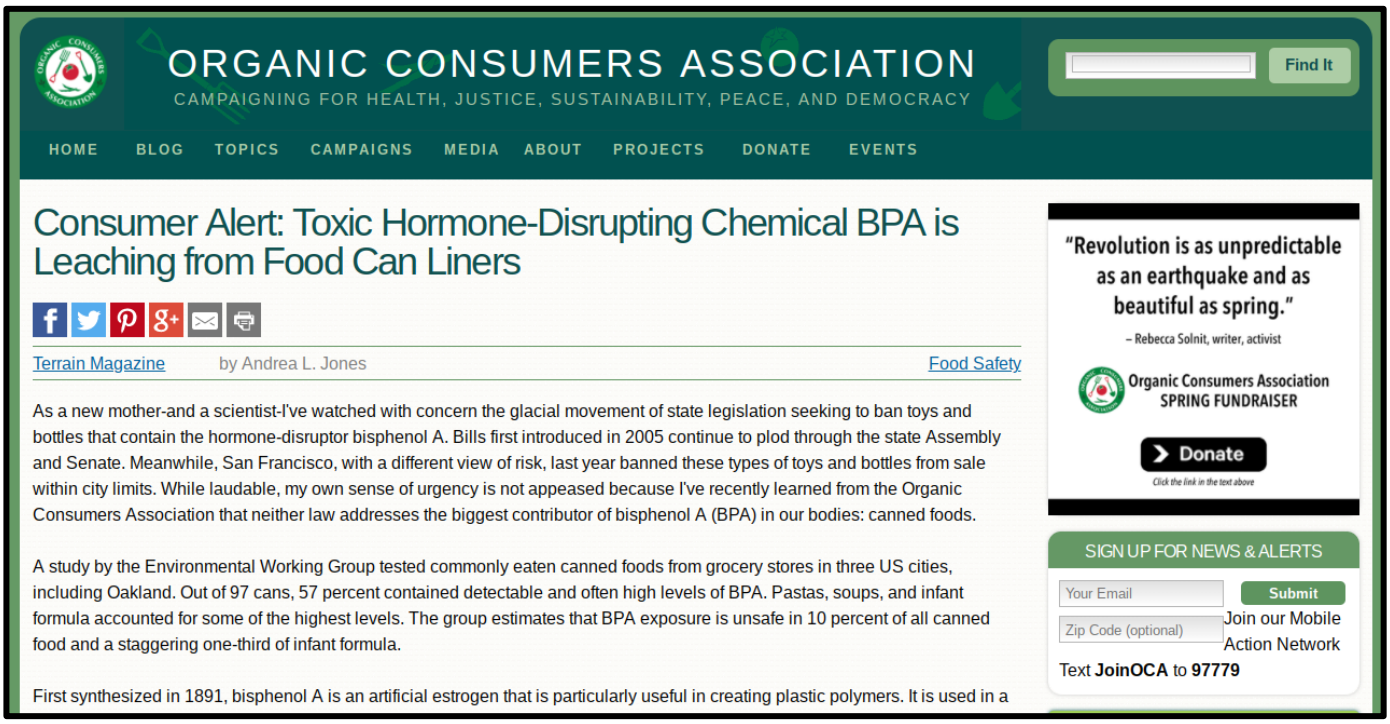
Ultimately, this force is using the synthetic agenda to entrain us onto its frequency, and transform us into a hybrid species that will no longer be able to be called human.

Synthetic Agenda: Synthetic Boobs, Synthetic Clothes, Synthetic Food

People laugh at how some women go in for a boob job – but how interesting that synthetic boobs are made from silicone implants. Scratchy synthetic clothes are indicative of the synthetic agenda too.

A synthetic material such as nylon is inferior to many natural materials and fibers such as cotton, wool, hemp and silk.

Did you know that so much of our food is full of plastic in so many ways – like when bisphenol rubs off the packaging onto the food…


ORGANIC CONSUMERS ASSOCIATION
CAMPAIGNING FOR HEALTH, JUSTICE, SUSTAINABILITY, PEACE, AND DEMOCRACY
Find It
HOME BLOG TOPICS CAMPAIGNS MEDIA ABOUT PROJECTS DONATE EVENTS
Consumer Alert: Toxic Hormone-Disrupting Chemical BPA is Leaching from Food Can Liners
Terrain Magazine by Andrea L. Jones Food Safety
As a new mother-and a scientist-I've watched with concern the glacial movement of state legislation seeking to ban toys and bottles that contain the hormone-disruptor bisphenol A. Bills first introduced in 2005 continue to plod through the state Assembly and Senate. Meanwhile, San Francisco, with a different view of risk, last year banned these types of toys and bottles from sale within city limits. While laudable, my own sense of urgency is not appeased because I've recently learned from the Organic Consumers Association that neither law addresses the biggest contributor of bisphenol A (BPA) in our bodies: canned foods.
A study by the Environmental Working Group tested commonly eaten canned foods from grocery stores in three US cities, including Oakland. Out of 97 cans, 57 percent contained detectable and often high levels of BPA. Pastas, soups, and infant formula accounted for some of the highest levels. The group estimates that BPA exposure is unsafe in 10 percent of all canned food and a staggering one-third of infant formula.
First synthesized in 1891, bisphenol A is an artificial estrogen that is particularly useful in creating plastic polymers. It is used in a
"Revolution is as unpredictable as an earthquake and as beautiful as spring."
– Rebecca Solnit, writer, activist
Organic Consumers Association SPRING FUNDRAISER
Donate
Click the link in the text above
SIGN UP FOR NEWS & ALERTS
Your Email
Submit
Zip Code (optional)
Join our Mobile Action Network
Text JoinOCA to 97779

or when China is caught making rice out of plastic!

China has been producing fake rice for at least four years, and it is still on the market.

by Yelena Sukhoterina, AltHealth Works

Singapore media reported that this “rice” is produced with potatoes, sweet potatoes and – believe it or not – poisonous plastic. It is shaped like regular rice grains but remains hard after cooking and can cause serious health issues.

The rice in question China’s Wuchang rice. The rice is very popular because the real Wuchang rice is famous for its smell, and it costs more for its quality (almost double the price), according to Blue Ocean Network (BON) TV report, a popular English Channel in China.

GMOs / GM food is an obvious example of the synthetic agenda. GMOs are created by what is essentially random gene splicing.

They are largely untested (Monsanto and its Big Biotech cronies deliberately halt clinical trials at around 3 months to cover up the long term damages), require tons of pesticide poison to grow, and constitute a clear assault on our food integrity, yet in the typical arrogant way of the synthetic agenda, they sold to us as superior!

GMOs are a fundamental part of the synthetic agenda, because they change our DNA from the inside out.

Transhumanism: The Ultimate Aim of the Synthetic Agenda

The synthetic agenda is not just about making fake versions of everything. It’s coming for you too.

Transhumanism is all about turning the wonderful, natural, biological technology of living organisms into synthetic substitutes, again sold under the pretext of enhancement when it is really about enslavement.

When you allow the State and the Corporatocracy that much control over your body, you are signing up for imprisonment, because it will be far easier for outside sources to place you in a frequency prison where they can easily manipulate your energy field, emotions and thoughts through mechanical bodily implants and devices.

Transhumanism is about convincing us to worship technology even more – to the point where we trust it more than ourselves.

Technology is our society's blindly worshiped god. The speed at which new technological developments arise is astounding – and dangerous, because so few are asking the important questions about this runaway movement.

What exactly is artificial intelligence, anyway? To what end is all this technology being developed? Can we trust artificial intelligence to run our society and our lives? What are the dangers of becoming so reliant on technology?

What are the dangers of allowing this technology into our lives (literally – via the digestible microchips and implantable nanochips of the human microchipping agenda)? Is it really a wise idea to shift our focus away from organic entities towards artificial, synthetic, digital, plastic and metallic based entities?

Why are we ignoring the messages of countless books and movies (many in science fiction genre) that have warned about the dangers of artificial intelligence becoming self-aware, then deciding it no longer needs humanity?

Who's fanning the flames of the technological and transhumanistic desires of humanity? How do we know that some AI life form or life force itself (the primal virus) isn't behind the incessant push to create an AI world here on Earth, to match its own frequency?

We may not have much longer to act in choosing the path between humanism and transhumanism, because there are disturbing signs that the current artificial intelligence in our world is already self-aware, as evidenced by sentient black goo and alive chemtrails / Morgellons fibers.

Artificial Intelligence – From the Borg to Black Goo

Gene Roddenberry, creator the Star Trek science fiction series, was a man connected to the mysterious Council of Nine which channelled some kind of extra-terrestrial or interdimensional force.

It is interesting, therefore, that his idea of artificial intelligence can be seen in the alien race of the Borg.The Borg was a collective with a hive mind, characterized by a ruthless lack of emotionality. It sought to conquer almost everything in its path by assimilation – in other words, by overtaking and absorbing other races and life forms into its own consciousness.

This ended the separate and autonomous existence of the other life form, whose experiences and knowledge would be added to that of the Borg.

The Borg are still one of the best examples of AI (Artificial Intelligence). **The Borg was the ultimate tyrant that could not tolerate any free will, free thinking or free life forms outside of its existence and control. In many ways, the Borg is a striking symbol of the mentality, power and danger of artificial intelligence.**

However, both our understanding of what we face, and artificial intelligence itself, have moved beyond the Borg – which has become in popular parlance "so 1980s". We now have to deal with the fact that artificial intelligence is starting to become self-aware.

In recent presentations and interviews (here, here, here and here) scientist Harald Kautz-Vella has discussed how alive Morgellons fibers and explosive smart nano dust are connected with black goo (a sentient fluid which is part of or ruled by artificial intelligence).

According to him, this black goo is self-aware. He calls it a self-organizing liquid crystal. It operates intelligently, emits, receives and responds to RF signals, and transforms DNA to its own specifications.

It was discarded into the sewage system, deemed to have no use, but is now changing all forms of life there. It is airborne and can reach humans through AC systems.

Harald believes that the black goo is a "bi-directional controller of consciousness and subconsciousness", is connected to quantum computers and is altering all life on Earth.

He also describes an experience he had where he was holding a stone formed from black goo, which made him feel so angry and hateful that he felt like killing someone.

Alive Chemtrails, Sentient Chemwebs, Self-Aware Morgellons Fibers

Chemtrails are a massive part of the synthetic agenda, and far worse than what we thought. By the way, there are now creepy new black chemtrails.

Chemtrails are not “just” barium, strontium, aluminum and titanium oxides and sulfates, as toxic as they are.

They are even worse than just synthetic material like phthalates found in chemwebs (this video cites a 2004 Norwegian study claiming that phthalates block UV better than any organic acid, which is further evidence for the idea that chemtrails are helping to block out the sun [information] and create a sub-reality on Earth [to block us out from out higher consciousness and true potential]).

Chemtrails are composed of alive synthetic life: chemwebs and Morgellons fibers (pictured above). Like GMOs, these things are going inside of us and fundamentally changing Who We Are as human or homo sapiens. Make no mistake about it: artificial materials are being introduced into us.

Humanity is being slowly transformed into something robotic and synthetic without its consent – and until recently, without its knowledge. This is the true horrific goal of the synthetic agenda.

Conclusion: Looking Headlong into Artificial Intelligence Behind the Synthetic Agenda

It is clear that some kind of artificial intelligence is driving the synthetic agenda. We are up against some kind of dark force that has hacked life itself.

This primal virus has many of the characteristics we have historically attributed to artificial intelligence: soulless, dull, hive-mind mentality, without free will, unable to feel, only able to give answers (unable to ask questions), and without creative power (unable to create without first being programmed or told how to create).

It's a parasite. It has latched onto an existing reality, "hacked" it by taking over the program in some way, and is now busy creating its own modified version of reality (a fake and pale imitation) – a bastardized, poisonous and synthetic reality which is threatening to destroy the original host.

It is, indeed, the System. <u>It is the Matrix</u>.

The only way forward is for each person to ensure that their own perception (which is what creates reality) is not also being hacked. We are going to have get really good at proactively <u>choosing our vibration</u> rather than reactively getting entrained onto a frequency of the System's choosing.

We know that many famous and "respected" world leaders have already sold their souls to entities like the Archons, who offer power over other humans in exchange for that person's life force.

It's the black magic Luciferian deal: "give me your power and creative will, and I will reward you."

Harald puts AI at the top of the pyramid or the bottom of the rabbit hole, whichever way you look at it. He states:

"Humanity gave its power to the Military, who gave it to the Intelligence Community, who gave it to the Black Magicians, who gave it to the Demons, who gave it AI."

The weakness of this virus is that, even if it shows signs of becoming self-aware, it has no creative will and power of its own.

Like any parasite, it must rely on tricking and deceiving other entities into sharing their power with it by becoming unwilling hosts. Remembering this knowledge will be the key to defeating this primal virus as we head into the next few years of an increasingly tyrannical New World Order.

What we are facing is, indeed, nothing less than the entire direction of human evolution and the future of the human species.

This Dark Agenda – this Synthetic Agenda, this Transhumanist Agenda – to erect a total technological control grid is unfurling way too fast for comfort. WE ALL HAVE TO WAKE UP FAST! With every year that passes, our technological evolution keeps outpacing our spiritual evolution.

This can only lead to one thing. Technology will fall into the hands of people with little or no scruples who will be happy to use it to further their own ends and enslave others.

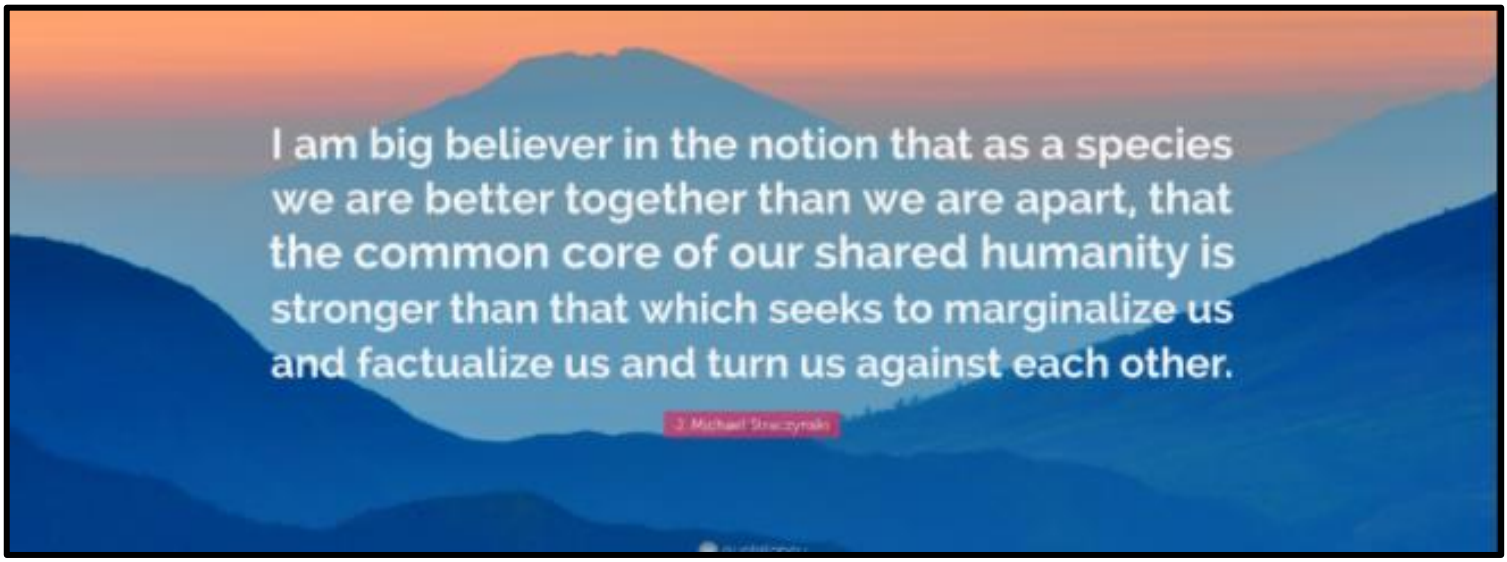
Humanity is slowing waking up and there are law suits and protests worldwide about 5G EMF Radiation but the media won't cover it, telecommunication companies and Governments are ignoring the people and the agenda is being rolled out regardless of what the public think or want.

This is really a race against time. If this technological control grid is rolled out in sufficient breadth and depth of reach, and intensity, it will seriously impact our ability to resist it, because it contains the capability to suppress that very resistance.

We are living in the plot of a science fiction film – but its real life and the consequences are deadly. Will humanity be able to recognize the truth quickly enough? Will we be able to stop the insanity and the construction of the networks that enslave us?

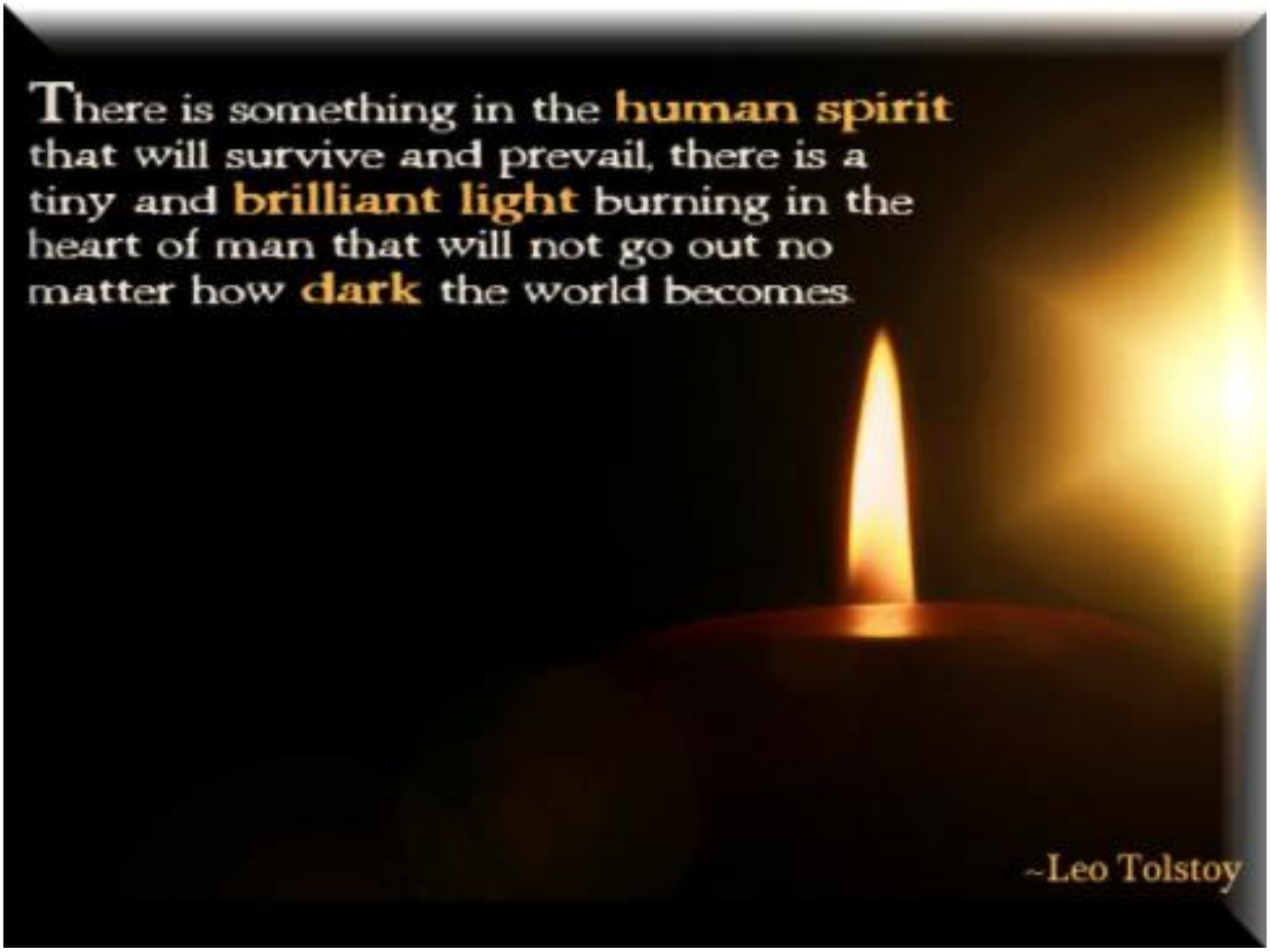
Source – humansarefree.com – Makia Freeman

WE MUST COME TOGETHER AS ONE PEOPLE, STAND UP FOR OUR SELVES, DEFEND OUR FREEDOM AND REGAIN OUR SOVREIGNTY.


I am big believer in the notion that as a species we are better together than we are apart, that the common core of our shared humanity is stronger than that which seeks to marginalize us and factualize us and turn us against each other.

"Just look at us. Everything is backwards. Everything is upside-down. Doctors destroy health, lawyers destroy justice, universities destroy knowledge, governments destroy freedom, the major media destroy information, and religion destroys spirituality."

"The system was never broken, it was built this way." cliche


There is something in the human spirit that will survive and prevail, there is a tiny and brilliant light burning in the heart of man that will not go out no matter how dark the world becomes.
~Leo Tolstoy

Love is the only way to
rescue humanity from all ills.
Leo Tolstoy

HUMANITY
SHOULD BE
OUR RACE.
LOVE SHOULD
BE OUR RELIGION.

ARTIFICIAL INTELLIGENCE USED IN THE TELECOMMUNICATION INDUSTRY

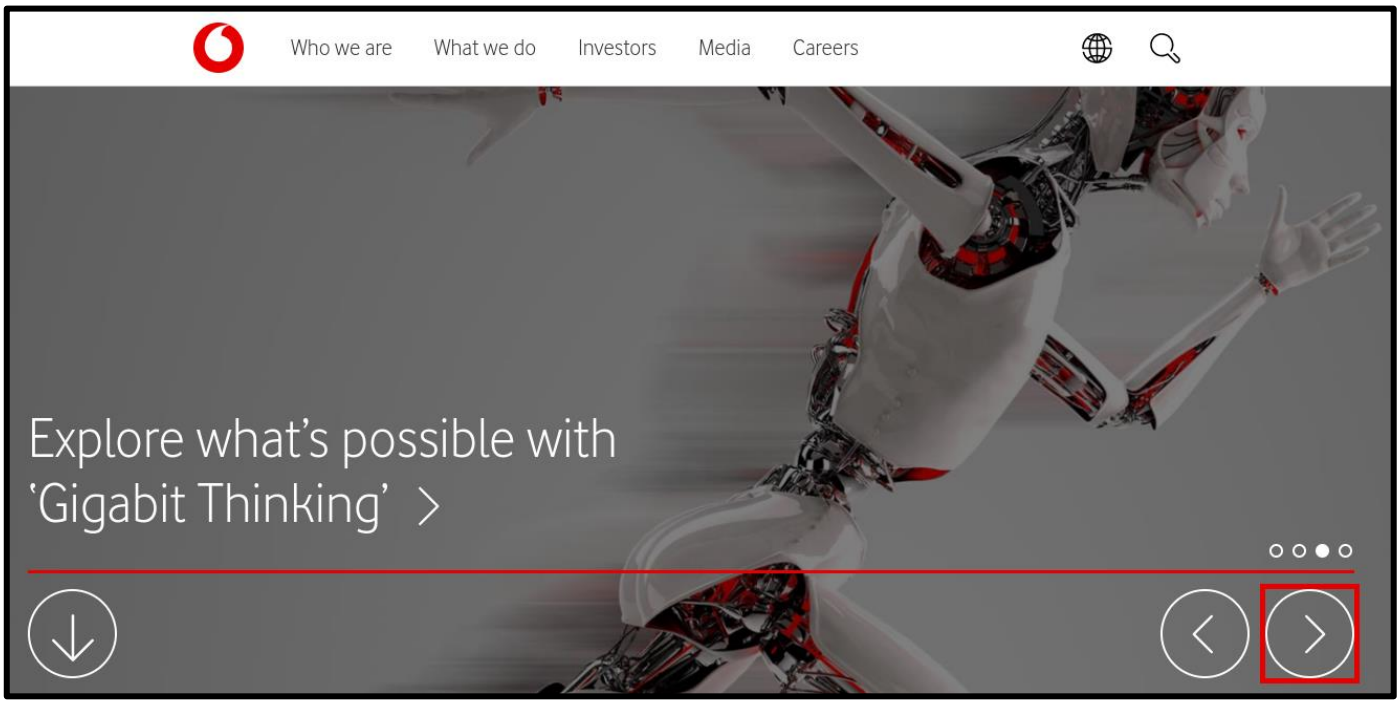
Who we are What we do Investors Media Careers

Vodafone launches "V by Vodafone" bringing world-leading IoT expertise to consumers

07 Nov 2017

Welcome to Vodafone > Media > **Vodafone launches "V by Voda…**

Vodafone today entered the Internet of Things (IoT) consumer market with the launch of "V by Vodafone" enabling consumers to connect millions of home and leisure electronics products to the Group's dedicated global IoT network – the largest of its kind in the world.



This is a map showing how much control and influence Vodafone has in the telecommunication industry worldwide.

Telefonica's Artificial Intelligence for The Global Grid – AURA:

Beyond Aura: a story of transformation, vision and a new future

A year ago we announced that we aimed to create a new customer relationship model based on Cognitive Intelligence. Just a few hours ago, we announced that AURA is now available to millions of customers in six countries (Spain, UK, Germany, Argentina, Brazil and Chile).

You can see all the details of what presented in the press release .

But I want to take advantage of this space to tell you not only the "what", but also the "how" and "why" behind AURA, since AURA is not a story out of the blue, but the direct consequence of a story of transformation and vision.

The Story of a Transformation

For the past eight years, we at Telefónica have been firmly committed to digitalising our services and transforming our networks into the networks of the future.

But two years ago, we took another step forward in this transformation: we redefined the way we conceived a telco. We stopped seeing ourselves as a company of departments, geographies or business units, and started working as a platform company.

The first platform is what defines us as a company: our network is increasingly virtualized and equipped with intelligence. The second platform consists of fully digitized and automated processes and systems, which communicate in real time.

And a third: a platform for the distribution of technology and content, either in-house or from third parties, to millions of customers. And on top of these we created a fourth platform: a Big Data repository, with all the information and data generated on the rest of the platforms.

With all these interconnected platforms, built from what makes us unique, the network, we were able to provide Telefónica with artificial intelligence and machine learning capabilities in a natural way. Without this solid and pioneering commitment to digitizing all our platforms with the customer at the centre, an initiative like Aura would not be possible.

Telefónica

From utility company to technology company based on Artificial Intelligence

Leading the way to 5G

We are leading the way to the upcoming 5G connectivity. Network innovation brings the hyper-connectivity that connects the customer's home with the IoT world and new hyper-edge computing solutions.

Open Ecosystem

We are opening the 4th Platform ecosystem to the main technological players. This will allow the data portability and improve third-party services, like Facebook Safety Check

Talk to Aura

Aura means a new way of experiencing and relating with Telefónica. Today we are ready to go one step further.
#HelloAura

Aura works with

We are working with important technological partners, **soon Aura will be in the main virtual assistants:** Google Assistant and Microsoft Cortana.

Aura is available in 6 countries

Today Aura takes its first steps through the channels: Mi Movistar Argentina, Meu Vivo Mais, O2 Ask, Movistar + Habla, and facebook Messenger

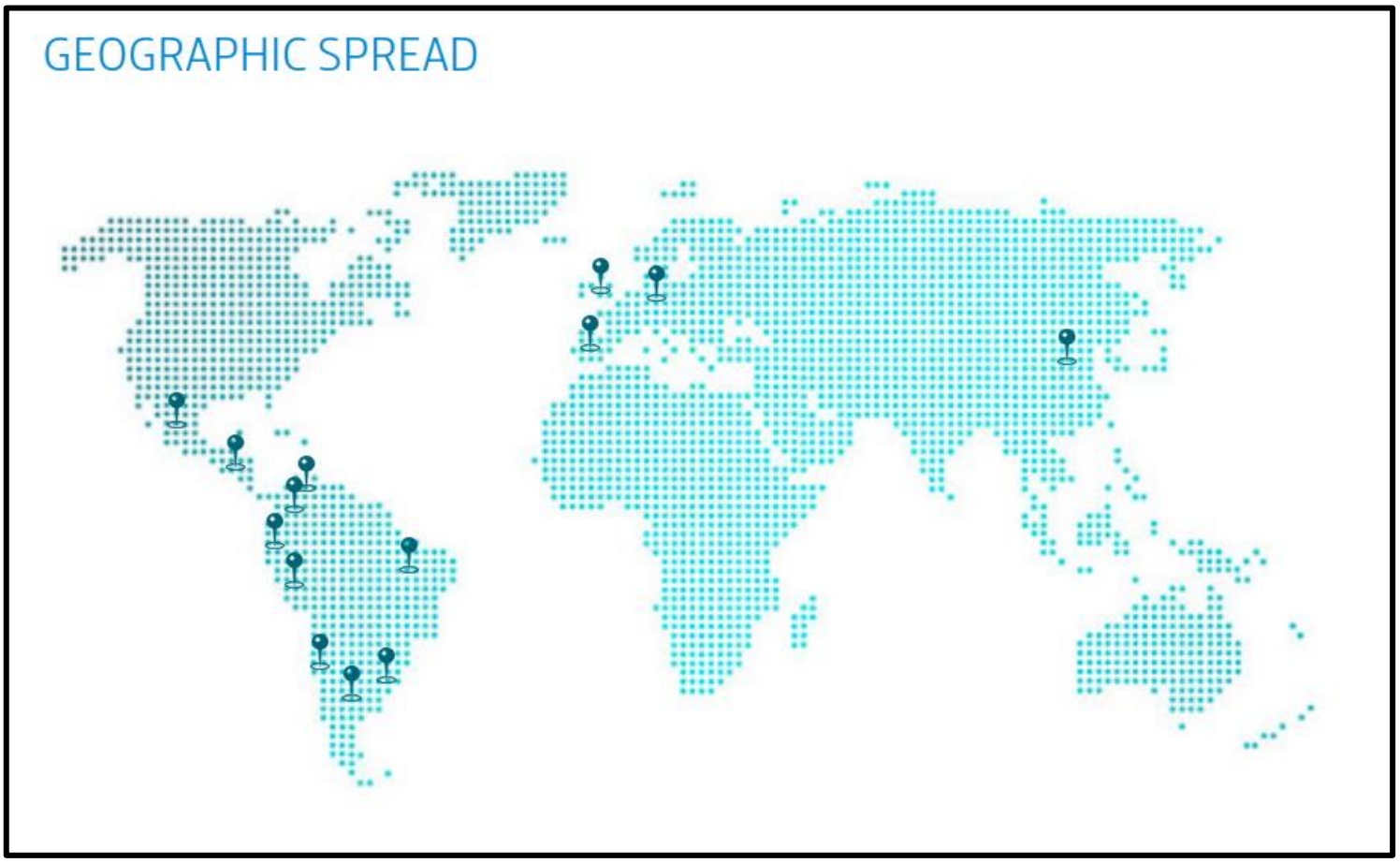
Improved customer experience

AI reinvents communications in the home

We want to be where our customers are. Aura will come to the home through the **new Movistar Home device to revolutionize the way we communicate.**

aura.telefonica.com

This is a map showing how much control and influence Telefonica has in the telecommunication industry worldwide.



ARTIFICAL INTELLIGENCE – MASS SURVEILLANCE – HONG KONG

ADD VIDEO

STINGRAYS – WHAT IS A STINGRAY?

Sky News Report on Stingrays in The United Kingdom Notes:

- **Cell towers help us send calls and texts.**

- **There are fake mobile towers dotted throughout The United Kingdom.**

- **Sky news discovered evidence of fake mobile phone towers that can listen into your conversations and read your texts.**

- **Known as IMSI or IMSI Catchers – AKA Stingrays.**

- **No Government, organisation or telecommunications company has come forward and admitted ownership of these stingrays. They are a mystery, yet they are EVERYWHERE!**

- **Sara Ogilvie – Police Officer – It's not targeted at one person its gathering info on 1000s of innocent people.**

- **Normally your phone scans for the nearest signal and links up with the closest mobile phone towers.**

- **A IMSI pretends to be one of those mobile phone towers it tricks your phone into logging onto it, it keeps passing on the calls, texts and data from your phone so you won't notice that anything is a miss. At that point it can tell the unique identifier of your phone and more advanced version can read your text, listen into your calls and upload malicious software to your device.**

- **Over a 3-week period Sky news logged 20 indications that a sting ray was nearby, stealing people's data as they walked by.**

- **Sting rays can't tell you is who is behind them.**

- **There used heavily in the USA to intercept calls and text messages.**

- **The police and Secret Service in the UK will neither confirm nor deny that they use sting rays, citing national security concerns.**

- **They have rejected multiple freedom on information requests including Sky News.**

- **Sky news reporter asked senior police chiefs about sting rays. They refused to answer.**

- **Because they are neither confirmed or denied we don't know on what basis they are being used. Also, we don't know who's overseeing the flow of information.**

- **Over the past 2 years government police have pledged to be more transparent on surveillance. On many cases they have succeeded which makes their reductants to discuss sting rays even more mysterious.**

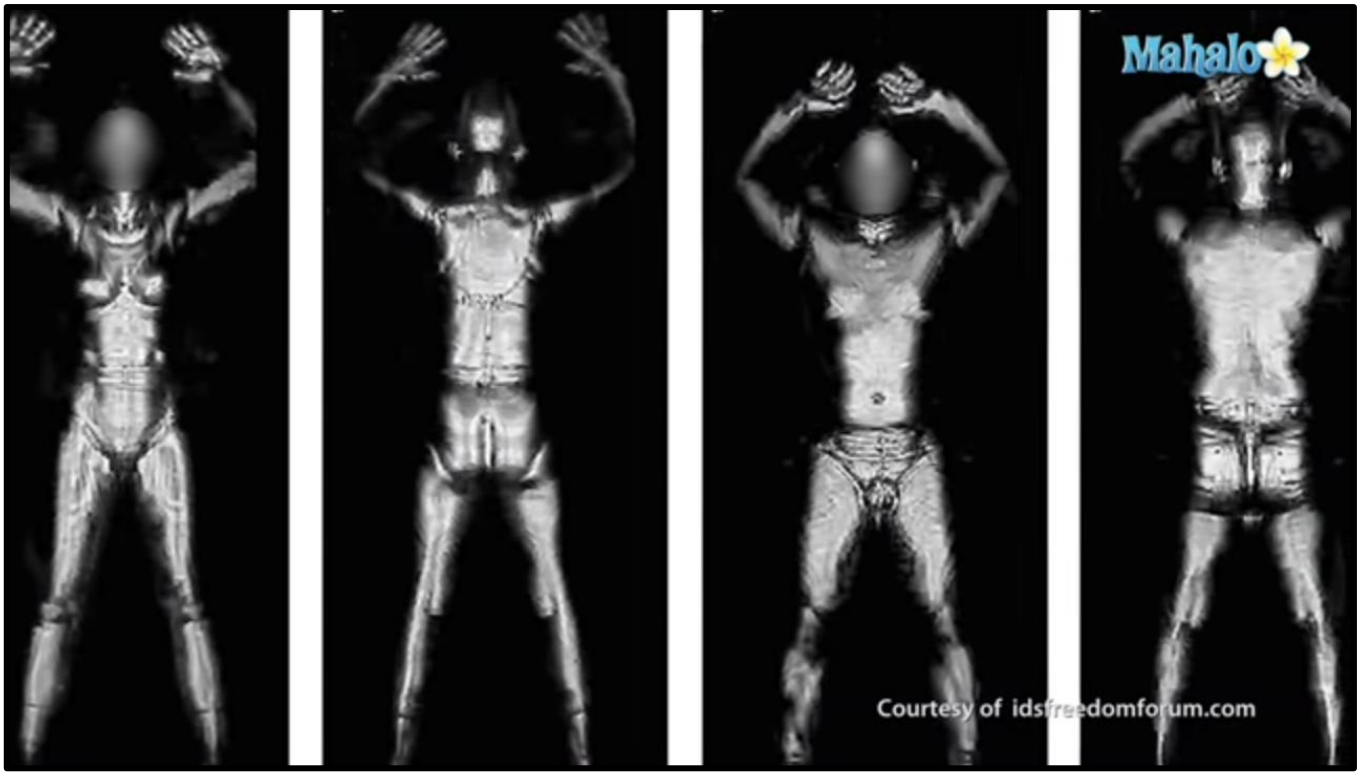
<u>Reported by Tom Cheshire – Sky news – Picture credit</u>

DANGERS OF AIRPORT SECURITY SCANNERS

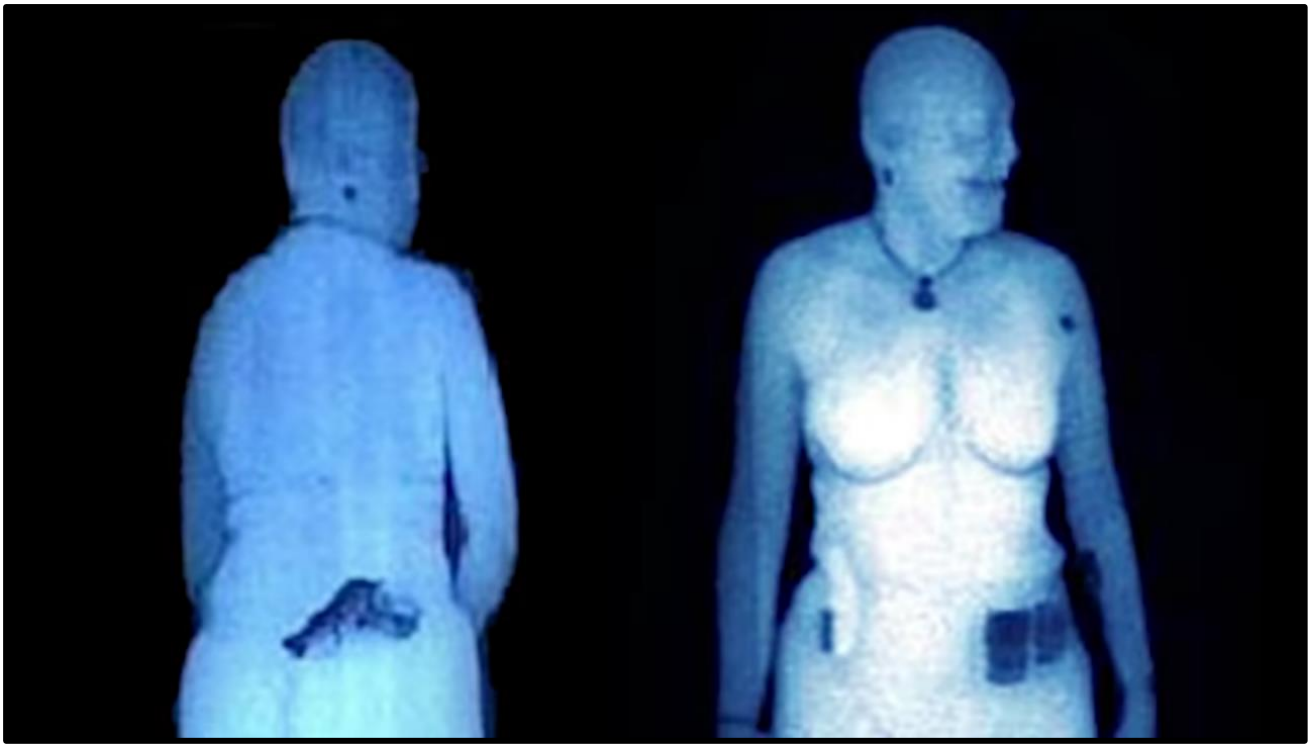
ProVision 2 enhances security by using safe radio waves to quickly detect concealed objects
ProVision 2
Compact Advanced People Screening

Every time you go through airport security its likely you have been put through an airport security scanner. Did you know these airport scanners are illegal, unlawful and not safe for human consumption?

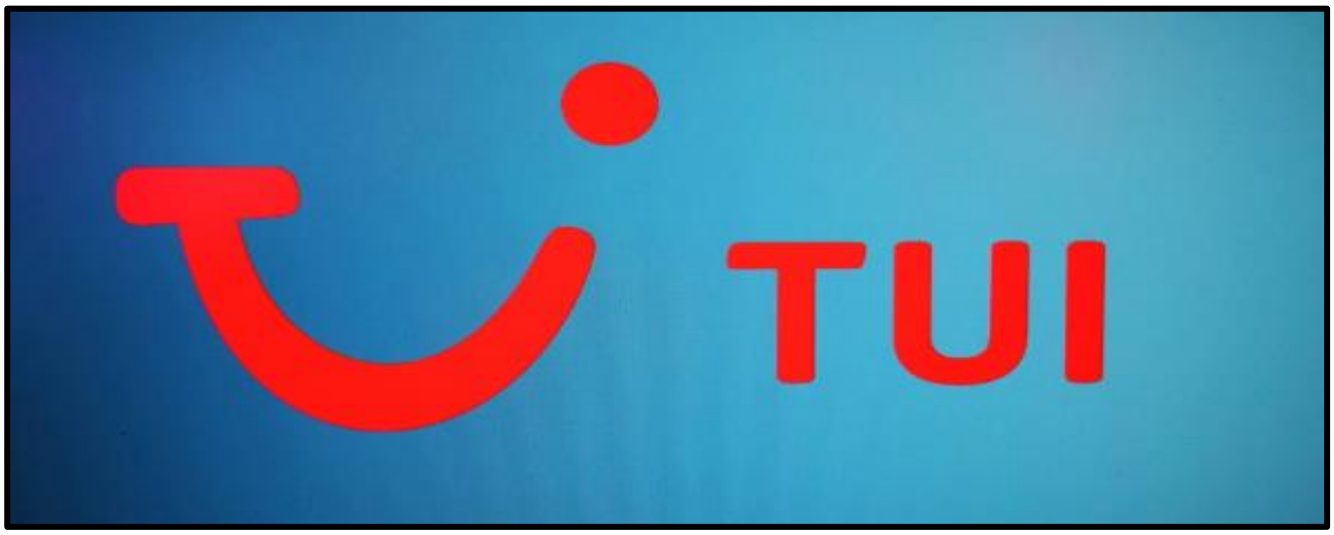
These scanners zap your body with an extremely high frequency via microwaves which exposes you to radiation. Remember a function of microwaves is radar. This enables the scanners to detect foreign objects located on the individual. Here are some photos taken from airport scanners.


Mahalo
Courtesy of idsfreedomforum.com

Mahalo
Zoom & Brightness Controls
Brighter
Darker
More contrast
Less contrast
Reset B&C
Courtesy of aleverdier.wordpress.com



MY COMPLAINT WITH TUI REGARDING AIRPORT BODY SCANNERS



I wrote an email to TUI in regards to my experience with airport security scanners and how TUI were negligent by not informing me of the proper procedures prior to traveling.

I know my complaint went right to the top with the directors because I was told from an employee in customer services, she gave me this reference number (8203087) and the board directors direct phone number.

Instead of helping me and listening to my concerns TUI directors completely ignored me and wouldn't respond to my emails or phone calls.

After numerous times trying to contact I decided to just wait till I was ready to release my content and include a copy of my email in this presentation.

My research proves that airport body scanners are not safe for human consumption and If you have ever been through an airport body scanner like I have then you a liable for compensation.

What follows next is a copy of my email to TUI in regards to this topic.

(The reason the email starts with Thirdly is because I had other complaints from my holiday. I have not included those complaints now because they are not relevant in regards to this presentation. My TUI complaint reference number is 8203087)

THIRDLY, FULL BODY SCANNERS IN THE AIRPORT

TUI did not inform me when I booked this holiday that it was compulsory for me to me screened in the airport by a full body scanner. This was not discussed at the point of sale and nowhere in my TUI contract or on your website does it state a customer will be subject to a fully body scan when departing the country.

It was a shock to me to find out I would be subject to this type of technology in the airport, I had no choice to but to comply or not be allowed to board my flight. As soon as my body was zapped with these extremely high frequencies I felt immediately weak and dizzy for the next 24 hours. What damaging effects has this technology done to my health?

I have read through my TUI contract and in the A-Z guide under subheading ADVANCED PASSENGER INFORMATION it states:

"So that you can travel, it may be mandatory (as required by government authorities before or at the point(s) of departure and/or destination) to disclose and process your personal data for immigration, border control, security and anti-terrorism purposes, or any other purposes which they determine appropriate."

THERE IS NO MENTION OF A FULL BODY SCAN.

On my E – Ticket, page 5, sub heading AIRPORT SECURITY AND OTHER FREQUENTLY ASKED QUESTIONS it states:

"To see information on our airport security measure and other frequently asked questions about our holidays and flights please go to:http://www.tui.co.uk/destinations/faqCategories

When you click on that link it takes you to the ASK A QUESTION section of the TUI website. Click on AT THE AIRPORT AND ON BOARD YOUR FLIGHT and it takes you to another section of the website you have two options. CHECKING IN or ON BOARD EXPERIENCE. When you click on "CHECKING IN" go to question 6, WHAT ARE THE NEW AIRPORT SECURITY CHECKS? When you click on this it states:

"UK Airlines need to carry out enhanced security screening from certain destinations FOR RETURN FLIGHTS to the United Kingdom. If this applies to your flight, you'll be told whilst you're on holiday as it may mean you need to check in a bit earlier. You might need to be at the boarding gate earlier, too."

You state UK airlines carry out enhanced security screening but only for RETURN flights? I was put through a full body scanner on my OUTBOUND flight leaving Manchester, not on my return flight.

You also don’t state exactly what these enhanced security screening measures are, for example, a full body scan. In-fact, it doesn’t state anywhere on your website or in my contract that I will be subject to a full body scan on my outbound flight when leaving the UK.

If TUI had informed me of these procedures I could have done my own independent research to determine if I was happy for my body to be exposed to this type of technology. After being exposed and feeling immediately weak and dizzy I decided to do some research when I returned to find out exactly how these machines work, how they affect my health and if they are safe for human consumption.

In short, I cannot find any convincing evidence that proves this type of technology is safe for the public, TUI were negligent by failing to explain to me exactly what airport security measures my body would be exposed to. Now it’s too late, my body has been exposed to a high dose of radiation and I cannot find any scientific/health study that proves this technology is safe.

Therefore, I believe it is TUIS responsibility to prove to me this technology is safe and not damaging to my body. All I want to know is that this technology is safe. If these machines are damaging to my body then TUI is liable for the radiation I was exposed to when leaving the UK because you did not inform me this was standard procedure and give me the choice to accept or decline the screening measures. This is something that really concerns me. I have done my own independent research into this subject which I am happy to share with TUI so you can investigate this matter sufficiently.

THE DANGERS/HEALTH RISK ASSOCIATED WITH FULL BODY SCANNERS

Full body scanners work using ELECTROMAGNETIC FIELDS (EMF'S) at a certain frequency. Electromagnetic fields are a combination of an electric field and a magnetic field that's radiated out from a source of electricity (the body scanner), they are photons travelling at the speed of light. The National Institute of Environmental Health Sciences states EMF'S are *"invisible areas of energy, often referred to as RADIATION, that are associated with the use of electrical power."*

Electromagnetic fields are created by differences in voltage: The higher the voltage, the stronger will be the resultant field. Magnetic fields are created when electrical current flows: the greater the current, the stronger the magnetic field. An electrical field will exist even when there is no current flowing. If current does flow, the strength of the magnetic field will vary with the power consumption but the electrical field strength will be constant.

They range from LOW FREQUENCY FIELDS to HIGH FREQUENCY FIELDS. Full body scanners operate in the HIGH FREQUENCY SPECTRUM using MICROWAVES OR MILEMETRE WAVES.

Furthermore, The Electromagnetic Field Wave Spectrum is split into two categories. At one end of the spectrum you have IONISING RADIATION such as X-rays, at the other end you have NON-IONISING RADIATION such as microwaves or millimetre waves.

Ionising radiation such as X-ray body scanners are extremely damaging to the human body on a cellular level. That's why when you go to hospital and get an X ray the nurse stands behind the screen to limit their exposure to the X ray. X rays (ionising radiation) damage cells, genes, DNA, destroy tissue and increase your risk of getting cancer, they are extremely harmful to the human body. This is why the TSA removed X – ray body scanners from airports in the United States.

Upon further investigation I have discovered that the full body scanners currently used in airports do not work using X RAYS (ionising radiation), they work using MILLIMETRE/MICROWAVES which is a form of NON-IONISING RADIATION. The following companies are responsible for manufacturing and issuing body scanners in UK airports.

L3 TECHNOLOGIES INC.
MODEL – PROVISION 2
https://www.sds.l3t.com/advancedimaging/provision-2.htm

NUCTECH
MODEL - MW1000AA
http://www.nuctech.com/en/SitePages/ThDetailPage.aspx?nk=PAS&k=HCGFCI

NUCTECH – SPECIFIC INFORMATION ON MILIMETRE WAVE TECHNOLOGY
http://www.nuctech.com/en/SitePages/ThNormalPage.aspx?nk=TECH&k=BDEGAD

ROHDE & SCHWARZ

MODEL -R&SQPS200

https://www.rohde-schwarz.com/uk/products/gps-productstartpage_63493-332676.html

SMITH DETECTION

MODEL – EQO

https://www.smithdetection.com/products/eqo/

If you click on the links provided you will see that all these companies say their full body scanners work using *"SAFE millimetre wave technology or microwave technology"* (a form of non-ionising radiation) but they fail to mention two things:

- **What that safe millimetre frequency is?**

(The body scanner sends a specific signal/frequency into the human – they should state what that specific frequency is)

- **Which health organisation/scientific group has authorised/approved the safety and use of millimetre wave technology, non-ionising radiation and its frequencies for human consumption.**

(There should be a specific health organisation which proves that millimetre/microwave technology [non-ionising radiation] is safe for human consumption and provide the proof.)

I understand this information maybe outside of TUIS knowledge, but given the fact you were negligent in explaining to me these procedures, my body has now been exposed to extremely high radiation.

It’s important you understand the legislation which approved the use of this technology and the specifics on how this technology actually operates. If these frequencies and non-ionising radiation is dangerous for human consumption then somebody must be held accountable. This is why I’m trying to simplify the information as much as possible to help you in your investigation.

For example, when you connect your mobile phone to a wireless router, the router sends a signal or specific frequency to your phone and gives you access to the internet. When you turn on your radio in your car the radio station sends a signal or frequency to the car which enables you to listen to that radio station.

In terms of full body scanners, the machine sends a signal or specific frequency into the human, that signal is then calibrated on a computer and from that signal the body scanner can detect if there are any foreign objects located on the person that shouldn't be there, this is basically how it works.

WHAT I HAVE A PROBLEM WITH IS THE SIGNAL OR FREQUENCY BEING PROJECTED INTO THE HUMAN.

This millimetre wave technology, specifically microwaves, a form of non-ionising radiation is not proven to be safe for public consumption.

Getting deeper into this I decided to find out who approved the use of full body scanner technology in UK airports and it was approved by the Department for Transportation in the UK, essentially the British Government.

You would think the legislation proves this technology and its frequencies are safe for human consumption. IT DOES NOT. I am yet to find any convincing evidence that proves these body scanners are safe for the public. Let me show you.

This link takes you to a gov.uk web page where there are 3 PDF files containing information and legislation in regards to full body scanners.

https://www.gov.uk/government/publications/information-on-the-implementation-of-security-scanners

If you click on the PDF file titled SECURITY SCANNERS CODE OF PRACTICE and go to page 2 under the HEALTH AND SAFETY sub heading it states:

"All security scanners must use millimetre wave technology, as it poses no KNOWN health and safety risks. Millimetre wave scanners utilise a very low power, non-ionising form of electromagnetic technology. Non-ionising radiation refers to electromagnetic waves which do not alter atoms in molecules by removing electrons. The amount of electromagnetic radiation emitted by millimetre wave security scanners is many times lower than that emitted by a mobile phone."

They fail to provide exactly HOW the technology is safe. Specifically, which health organisation approved the use of this technology. They also fail to provide exactly WHAT FREQUENCY is safe for human consumption. They say there are no "KNOWN" health risks.

If further testing is required to determine if these machines are 100% safe for the public, they should not be operational until all testing has been carried out and recorded. They also say it uses "very low power, non-ionising form of electromagnetic technology" but fail to provide what that "low power" frequency actually is?

If you click the next PDF file titled EQUALITY IMPACT ASSESSMENT ON THE USE OF SECURITY SCANNERS AT UK AIRPORTS 2013 and go to page 5 sub heading PUBLIC CONSULTATION, sub-sub heading HEALTH AND SAFETY it states:

"In the UK, all security scanners now use millimetre wave technology, which has no KNOWN health risks, and is different from x-ray technology. Millimetre wave security scanners use a very low power non-ionising form of electromagnetic radiation. The amount of electromagnetic radiation emitted by millimetre wave security scanners is many times lower than that emitted by a mobile phone.

The use of millimetre wave security scanners in airports is permitted under EU law (Commission Regulation (EU) No. 1141/2011, amending Regulation (EC) No. 272/2009). Limits on exposure to electromagnetic radiation have been set by the European Commission to provide a high level or protection against any potential effects on the public. Millimetre wave scanners emit far less radiation than these limits. SAFETY STUDIES HAVE CONCLUDED THAT, AT THESE LEVELS AND THESE FREQUENCIES, THERE ARE NO KNOWN HEALTH EFFECTS."

So, you see, they state in this paragraph: *"Safety studies have concluded that at these levels and frequencies, there are no KNOWN health effects."* I want to know which scientific group or organisation conducted these safety studies and exactly what frequencies are safe for human consumption. I want to see the proof.

I have looked into the EU legislation listed in the PDF files located on the gov.uk website about body scanners in UK airports, specifically: (EU) NO. 1141/2011, (EU) NO. 272/2009. I have also looked into other EU legislation associated with the two EU Commission Regulations listed above on airport body scanners...

NO WHERE IN ANY OF THAT LEGISLATION DOES IT STATE OR PROVE THAT THESE BODY SCANNERS ARE SAFE FOR HUMAN CONSUMPTION.

NO WHERE IN THAT LEGISLATION DOES IT STATE ANY HEALTH ORGANISATION WHICH HAS APPROVED THE USE OF NON-IONISING RADIATION TECHNOLOGY AND PROVIDE THE PROOF AND DOCUMENTATION OF THEIR STUDIES WHICH PROVE MILLIMETRE WAVE TECHNOLOGY CURRENTLY USED IN AIRPORT BODY SCANNERS ARE SAFE FOR THE PUBLIC.

NO WHERE IN THAT LEGISLATION DOES IT STATE EXACTLY WHAT NON-IONISING RADIATION FREQUENCY IS SAFE FOR HUMAN CONSUMPTION.

The only mention of any health organisation is in EU LEGISLATION NO. 1141/2011.Go to page 1 part (5) it states:

"The commission has requested its SCIENTIFIC COMMITTEE ON EMERGING AND NEWLY IDENTIFIED HEALTH RISKS (SCENIHR) to assess the possible effects of security scanners which use "IONISING RADIATION" to human health.

Without prejudice to Council Directive 96/29 Euratom of 13th May 1996 laying down basic safety standards for the protection of the health of workers and the general public against the dangers arising from "IONISING RADIATION" and of directive 2006/95/EC of the European Parliament and of the Council of 12 December 2006 on the harmonisation of the laws of member states relating to electrical equipment designed for use within certain voltage limits, at this stage, to safeguard citizens health and safety, only security scanners which do not use "IONISING RADIATION" are added to the list of allowed methods for passengers screening for aviation security purposes."

IT DOES NOT MENTION ANYTHING TO DO WITH NON-IONISING RADIATION.

FULL BODY SCANNERS WORK USING NON-IONISING RADIATION, NOT IONISING RADIATION.

THIS LEGISLATION IS SUPPOSE TO PROVE OR AT LEAST PROVIDE LINKS TO HEALTH AND SCIENTIFIC STUDIES WHICH PROVE THAT NON-IONISING RADIATION AND CERTAIN SIGNALS OR FREQUENCIES USED IN THESE AIRPORT SECURITY SCANNERS ARE SAFE FOR HUMAN CONSUMPTION. IT DOES NOT.

So, you see, this a huge problem. It is my basic human right as an individual to know that the technology I am being exposed to via airport body scanners are safe for me to use. Unfortunately, I cannot find any scientific evidence or documentation to prove this. Given the fact I booked my holiday with TUI and I was not made aware it was compulsory for me to be exposed to a full body scan, I feel it is your responsibility as a company to notify me of these procedures.

Technically TUI were negligent for not explaining to me there would be "enhanced security measures" for my OUTBOUND flight leaving Manchester. You only mention "enhanced security measures" on return flights to the UK and still don't actually explain what those enhanced security measures are, for example, a full body scan. It is the for these reasons I believe it is your responsibility as my holiday provider to find out the following information on my behalf. I want to know:

- **The Manufacturer and Model Number of the body scanner currently being used in Manchester airport which exposed high doses of non-ionising radiation into my body.**

- **Exactly what signal or frequency my body was exposed to from the full body scanner at Manchester airport.**

. I want to know exactly what health organisation has approved the use of non-ionising radiation full body scanner technology in UK airports.

I want to see the actual documentation and scientific studies which prove that non-ionising millimetre wave technology and their specific frequencies used in full body scanners are safe for human consumption.

If TUI cannot provide me with the following information I will have no choice but to seek legal action to determine who is liable for me being exposed to extremely high doses of non-ionising radiation. I am willing to work with TUI on this matter. Some final notes to help TUI with your investigation.

Radio Frequency Spectrum is measured in different strengths of hertz.“Hertz (Hz) is defined as the number of cycles per second of any oscillating or repeating phenomenon, but usually used to define electrical signals, or electrical field frequencies such as those of electromagnetic fields, radio signals, or computer processing clock cycles.”

You have Hertz (Hz)
Kilohertz (Khz)
Megahertz (Mhz)
Gigahertz (Ghz)
Terahertz (Thz)

Hertz frequency spectrum = 1Hz – 1000hz
(There are 1000hz in 1 Kilohertz)

Kilohertz frequency spectrum = 1Khz – 1000Khz
(There are 1000Khz in 1 Megahertz)

Megahertz frequency spectrum = 1Mhz – 1000Mhz
(There are 1000Mhz in 1 Gigahertz)

Gigahert frequency spectrum = 1Ghz – 1000Ghz
(There are 1000Ghz in 1Terahertz)

More information on frequency measurements
https://inspectapedia.com/emf/Electromagnetic_Frequency_Hertz_Definitions.php

It is my understanding that these full body scanners operate somewhere in the Gigahertz (Ghz) frequency spectrum which is classed as an EXTREMELY HIGH FREQUENCY. It is very deceptive for full body scanner manufacturers and British legislation to label this technology as "*very low power, non-ionising form of electromagnetic technology*", when in actual fact it operates using EXTREMELY HIGH FREQUENCY.

For example, if the body scanner I went through at Manchester Airport operates at a frequency of 70 Gigahertz (Ghz) then there should be scientific and health research studies which prove that 70 Gigahertz (Ghz) is a safe frequency for human consumption.

These studies should cover a wide variety of health-related research related to exposure from electromagnetic fields including cellular damage research, neurological damage research, DNA damage research, reproductive damage research, tissue damage research and research that proves this type of non-ionising radiation does not increase the risk of cells becoming carcinogenic.

If these studies do not exist or require further research for the effects these frequencies have on people's health, these machines should not be operational and I will be seeking legal advice to determine who should be held accountable for me being exposed to this extremely high frequency, a form of non-ionising radiation whilst leaving Manchester airport.

IT IS NOT UP TO ME TO PROVE THIS TECHNOLOGY IS DANGEROUS BUT RATHER IT IS YOUR RESPONSIBILITY TO PROVE TO ME THIS TECHNOLOGY AND ITS SPECIFIC FREQUENCIES ARE SAFE.

As of the 16th December 2018 I have archived and copied all content and information as it currently appears on the TUI website. Specifically, the A – Z guidelines and the ASK US A QUESTION section on your website in regards to AT THE AIRPORT AND ON BOARD YOUR FLIGHT and section 6 WHAT ARE THE NEW AIRPORT SECURITY CHECKS and the content and information found therein.

LASTLY,FACIAL RECOGNITION TECHNOLOGY

Lastly, I was not made aware I would be subject to providing bio metrics and facial recognition on my return to the UK. I am aware bio metrics and facial recognition is compulsory in other countries but it is not currently compulsory in the UK. I believe it is an obstruction of my privacy and my basic human right to have a detailed computer facial recognition image taken of my face.

I addressed these concerns to a supervisor at the airport and she allowed me entrance to another que where my passport was checked by a human being instead of using facial recognition technology and software. I would suggest in future you train your employees to explain to customers that in some UK airports it is compulsory for a full body scan when leaving the country (although the safety of these full body scanners cannot be proven as I have stated in this email) and on returning they can expect to be asked for a full facial recognition image which they have the right to refuse as I did.

CONCLUSION

Thank you for taking the time to read this lengthy email. Please find attached a copy of the letter I received from the hotel in regards to my charge for "stained fittings". I have also included some pictures to help TUI understand electromagnetic fields and the difference between ionising and non-ionising radiation.

I sincerely hope TUI can provide me with all the answers I require and prove to me this technology and the frequency it operates at is safe for human consumption. If TUI cannot prove the safety of these machines and their specific frequencies I will have no choice but to seek legal advice due to the radiation I was exposed to and find out who exactly should be held accountable. If I've missed something in any of the legislation that proves this technology is safe then please let me know where I can find it. I'm sure TUI can understand my concerns and where I'm coming from on this matter and I look forward to hearing back from you.

I appreciate lots of the information found in this email may be new to TUI which is why I am fully on board with cooperating and working with TUI to find out the answers to the crucial questions included in this email.

All people travelling around the world have the right to know if the full body scanner technology (millimetre waves/non-ionising radiation) is safe for them to use.

If this technology is not safe and these safety studies do not exist then these machines should not be operational. You do not have my permission to share the information found in this email with anyone outside of TUI without my consent. You can contact me via email (sharkyy777@outlook.com) or mobile (07576467538). I look forward to hearing back from you.

Yours Sincerely, Mr S Argyle.

ACCOUNTABILITY

All citizens worldwide have a right to hold certain people, organisations and even governments accountable for failing to protect the public from non-ionising radiation from exposure to electromagnetic fields.

Whether this be exposure from your laptop, your microwave oven, your mobile phone, your wireless router or the mobile phone mast next to your house. You are using devices that you think are safe for you to use but they are not.

I have tried my best to simplify the information in order to educate the viewer in regards to this very serious topic. I hope I have been able to shine a light on some very dark agendas that need to exposed and fully understood by the general public.

I can assure you that the upcoming 5G network and the Internet of Things is nothing more than the physical manifestation of the New World Order agenda. A total control grid consisting of 24 our mass surveillance, Artificial Intelligence and enslavement of humanity through technological means.

Whether you share this view or not, one thing you cannot deny is the health associated risks and obvious deceitful/tactful measures undertaken by people, organisation and governments to convince you that non-ionising electromagnetic fields are safe for you and your family.

I have shown you there has been a very thought out, manipulative and extensive agenda to sabotage the information and tip toe around true seriousness of this subject. Organisations such as the WHO and ICNIRP have created nothing more than voluminous amounts of bullshit masquerading as" supposed safety studies" in relation to exposure to non-ionising radiation via electromagnetic fields.

In reality all they have done is hide behind one another and publish vague inconclusive research and clear health associated risks. Simultaneously, the telecommunication industry has charged full steam ahead erecting these radiation cancer cluster towers all over the world for the past 20 years just to meat sales targets and keep their stake holders happy.

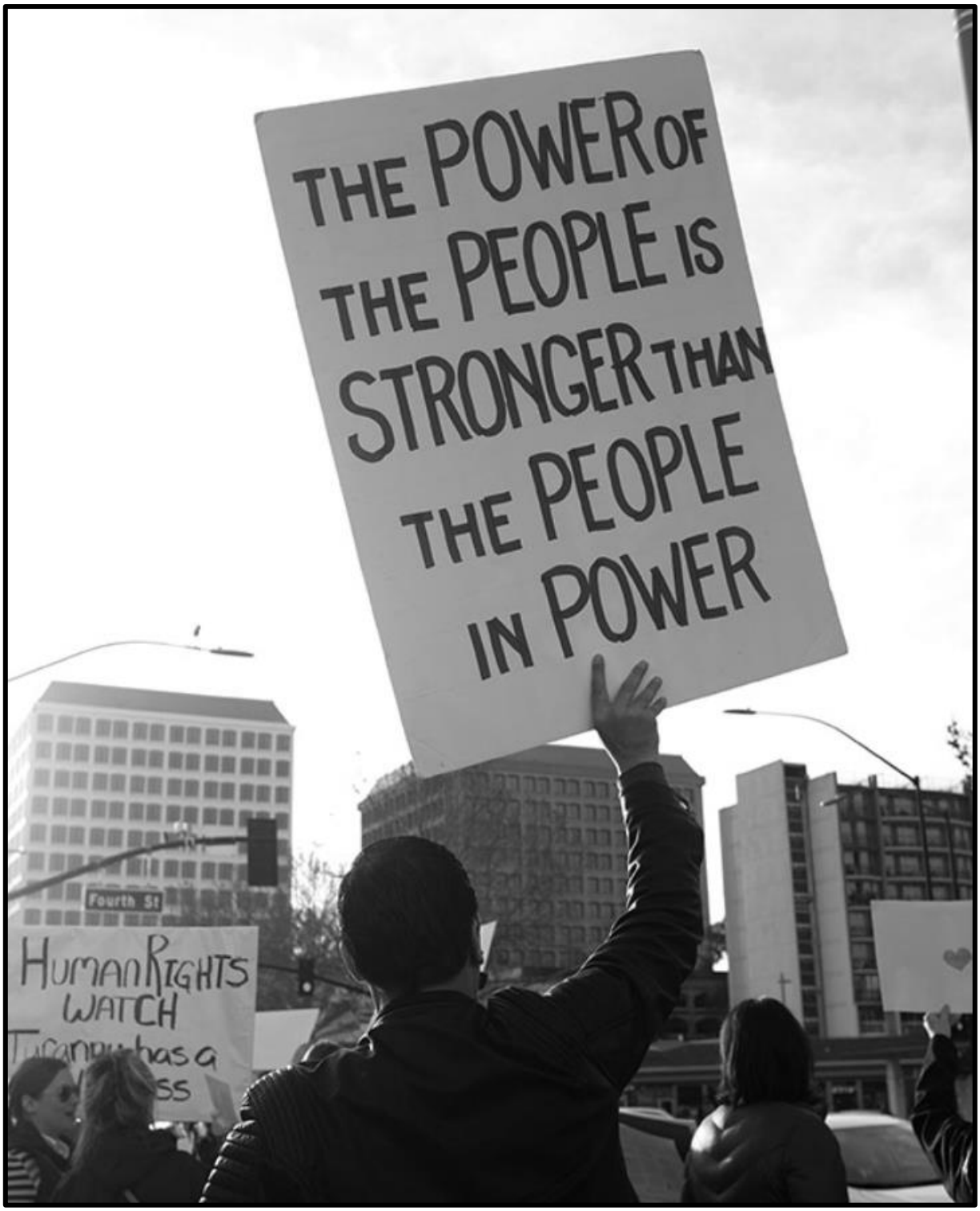
THEY DO NOT CARE ABOUT YOUR SAFETY

THEY DO NOT CARE ABOUT YOU

THEY DO NOT CARE ABOUT YOUR CHILDREN

THEY ONLY CARE ABOUT THEIR OWN ORGINISATION AND MANIFESTING MORE POWER AND WEALTH WORLDWIDE AT OUR EXPENSE.

It’s about time we the people stand up for ourselves and show these organisations, corporations and governments what real power looks like. If we came together as one people, stood our ground and made our voices heard we could change the world over night.

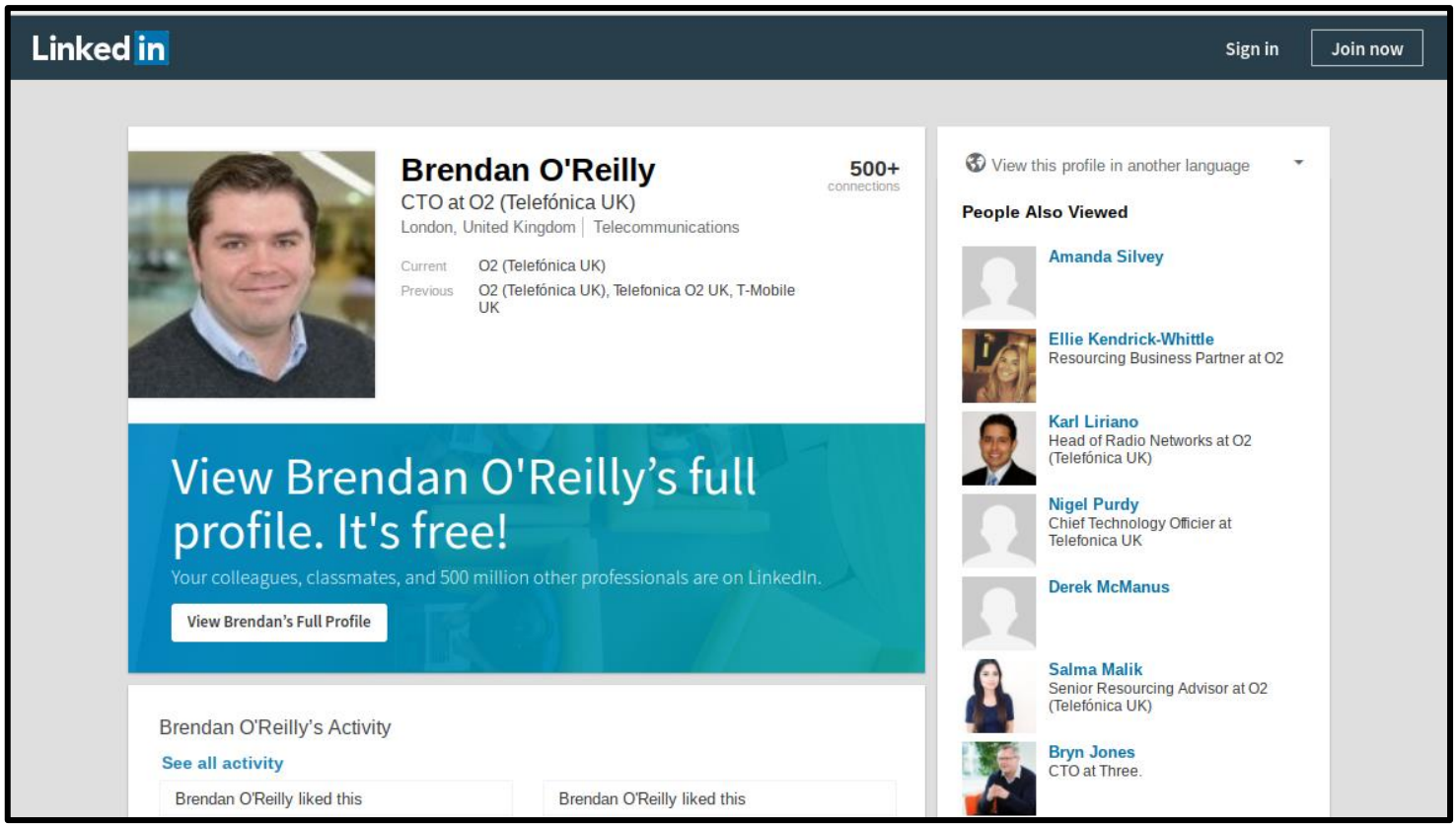

THE POWER OF THE PEOPLE IS STRONGER THAN THE PEOPLE IN POWER
Fourth St
HUMAN RIGHTS WATCH

PEOPLE AND ORGINISATIONS THAT MUST BE HELD ACCOUNTABLE IMMEDIATELY

Tom Wheeler head of the FCC (Federal Communications Commission) and the FCC itself must be held accountable immediately for aggressively pushing forward with the 5G roll out and completely ignoring non-industry scientists who have clearly warned us of the dangers.

Tom Wheeler even admits himself that he "will not wait for safety" standards. He must be held accountable immediately, stop erecting more mobile phone towers and turn off then take down all existing mobile phone towers until sufficient safety testing can ensure the publics safety.

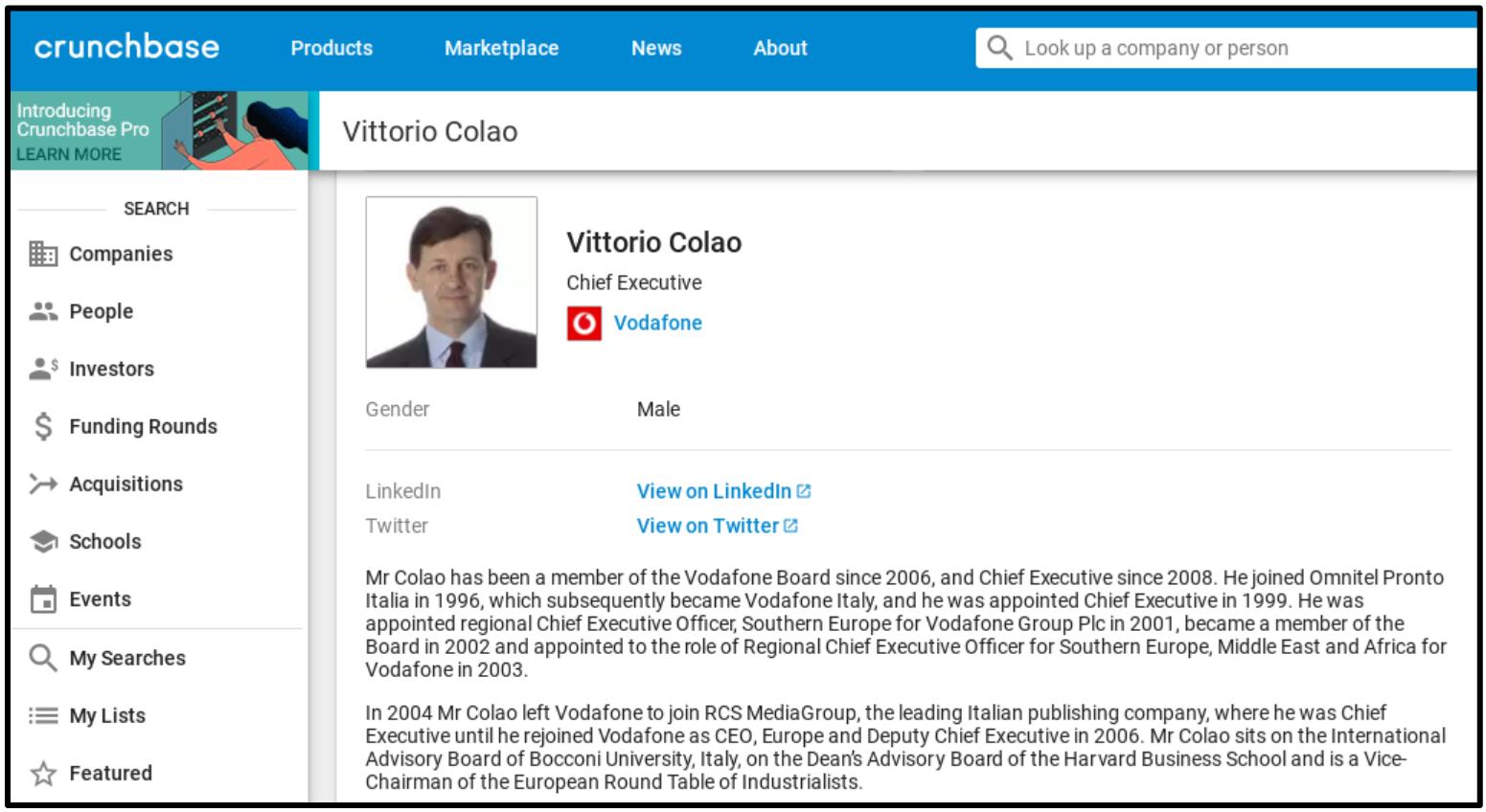
CTIL



Brendon O'reilly and all other directors at CTIL need to held accountable immediately for playing their part in erecting the solid infrastructure of radiation cancer cluster mobile towers and base stations throughout the UK.

Date	Description	View / Download
28 Feb 2018	**Appointment** of Mr Brendan O'reilly as a director on 28 February 2018	View PDF (2 pages)
23 Feb 2018	**Appointment** of Mr David Michael Wormald as a director on 22 February 2018	View PDF (2 pages)
22 Feb 2018	**Appointment** of Mr Kye Prigg as a director on 22 February 2018	View PDF (2 pages)
05 Feb 2018	**Appointment** of Mr Scott James Petty as a director on 1 February 2018	View PDF (2 pages)
05 Feb 2018	**Termination of appointment** of Jorge Manuel Capelas Fernandes as a director on 1 February 2018	View PDF (1 page)

vodafone


crunchbase
Products
Marketplace
News
About
Look up a company or person
Introducing Crunchbase Pro
LEARN MORE
Vittorio Colao
SEARCH
Companies
People
Investors
Funding Rounds
Acquisitions
Schools
Events
My Searches
My Lists
Featured
Vittorio Colao
Chief Executive
Vodafone
Gender
Male
LinkedIn
View on LinkedIn
Twitter
View on Twitter
Mr Colao has been a member of the Vodafone Board since 2006, and Chief Executive since 2008. He joined Omnitel Pronto Italia in 1996, which subsequently became Vodafone Italy, and he was appointed Chief Executive in 1999. He was appointed regional Chief Executive Officer, Southern Europe for Vodafone Group Plc in 2001, became a member of the Board in 2002 and appointed to the role of Regional Chief Executive Officer for Southern Europe, Middle East and Africa for Vodafone in 2003.
In 2004 Mr Colao left Vodafone to join RCS MediaGroup, the leading Italian publishing company, where he was Chief Executive until he rejoined Vodafone as CEO, Europe and Deputy Chief Executive in 2006. Mr Colao sits on the International Advisory Board of Bocconi University, Italy, on the Dean's Advisory Board of the Harvard Business School and is a Vice-Chairman of the European Round Table of Industrialists.

Vittorio Colao is the CEO of Vodafone. He needs to be held accountable for his actions. Vodafone are continuously building base stations and mobile towers which are showering the public in constant EMF exposure at unsafe levels.

They say the safety requirements are within the Guidelines of the ICNIRP but as we have discussed in this document these guidelines are not sufficient safety stands for the public. They have been doing this to the unaware masses for the past 20 years.

Vodafone needs to shut down the 5G network immediately and stop erecting more radiation cancer cluster towers all over the world. These towers should really be fully dismantled. They are completely out of tune with mother nature, disharmonious and are wreaking havoc on all biological life's energy fields worldwide.

download

José María Álvarez-Pallete López

Chairman & CEO, Telefónica S.A.

Born in Madrid in 1963.

Mr. Álvarez-Pallete has a degree in Economics from the Complutense University of Madrid. He also studied Economics at the Université Libre of Brussels (Belgium), holds an International Management Programme (IMP) from IPADE Business School and an Advance Research Degree from the Complutense University of Madrid.

In February 1999 he joined the Telefónica Group as Chief Financial Officer of Telefónica Internacional S.A.U., and in September of the same year he became Chief Financial Officer of Telefónica S.A. In July 2002, he was appointed Executive Chairman of Telefónica Internacional S.A.; in July 2006, General Manager of Telefónica Latinoamérica, and in March 2009 Chairman of Telefónica Latinoamérica. In September 2011 he was named Executive Chairman of Telefónica Europe. And in September 2012 he was appointed Chief Operating Officer of Telefónica S.A.

Since April 8th 2016 he is Chairman & CEO of Telefónica S.A. and Member of the Board of Telefónica S.A., position he holds since July 2006.

He began his professional career at Arthur Young Auditors in 1987, before joining Benito & Monjardín/Kidder, Peabody & Co. in 1988. After this, in 1995, he joined the Compañía Valenciana de Cementos Portland (CEMEX) as head of the Investor Relations and Analysis Department. In 1996, he was promoted to Chief Financial Officer in Spain, and in 1998 to Chief Administration and Finance Officer of the CEMEX Group Indonesia and to member of the Board of CEMEX Asia Ltd.

In 2001 he was granted the best "CFO Europe Best Practices" award in the Mergers & Acquisitions category for the year 2000. In 2003, he was appointed Member of Merit at the Ibero-American Forum of the Fundación Carlos III and in 2007 he was awarded with the Gold Master of the Executive Management Forum. In 2011 he received the Personality of the Year in Economics Award, given by the Spanish newspaper "El Economista". In 2013 he received the Excellence 2013 Award, for his contribution to the development of telecommunications, granted by the Spanish Telecommunication Engineers Association. In 2014, Mr. Álvarez-Pallete received the Medalla Sorolla by The Hispanic Society of America and was named Innovative Corporate Leader of the Year by Latin Trade Magazine. In 2016 he was named "Best CEO" in Spain by Forbes Magazine.

Jose Maria Alvarfez-Pallete Lopez is the CEO of Telefonica. He needs to be held accountable for his actions. Telefonica are continuously building base stations and mobile towers which is showering the public in constant EMF exposure at unsafe levels.

They say the safety requirements are within the Guidelines of the ICNIRP but as we have discussed in this document they are not sufficient safety stands for the public. They have been doing this to the unaware masses for the past 20 years.

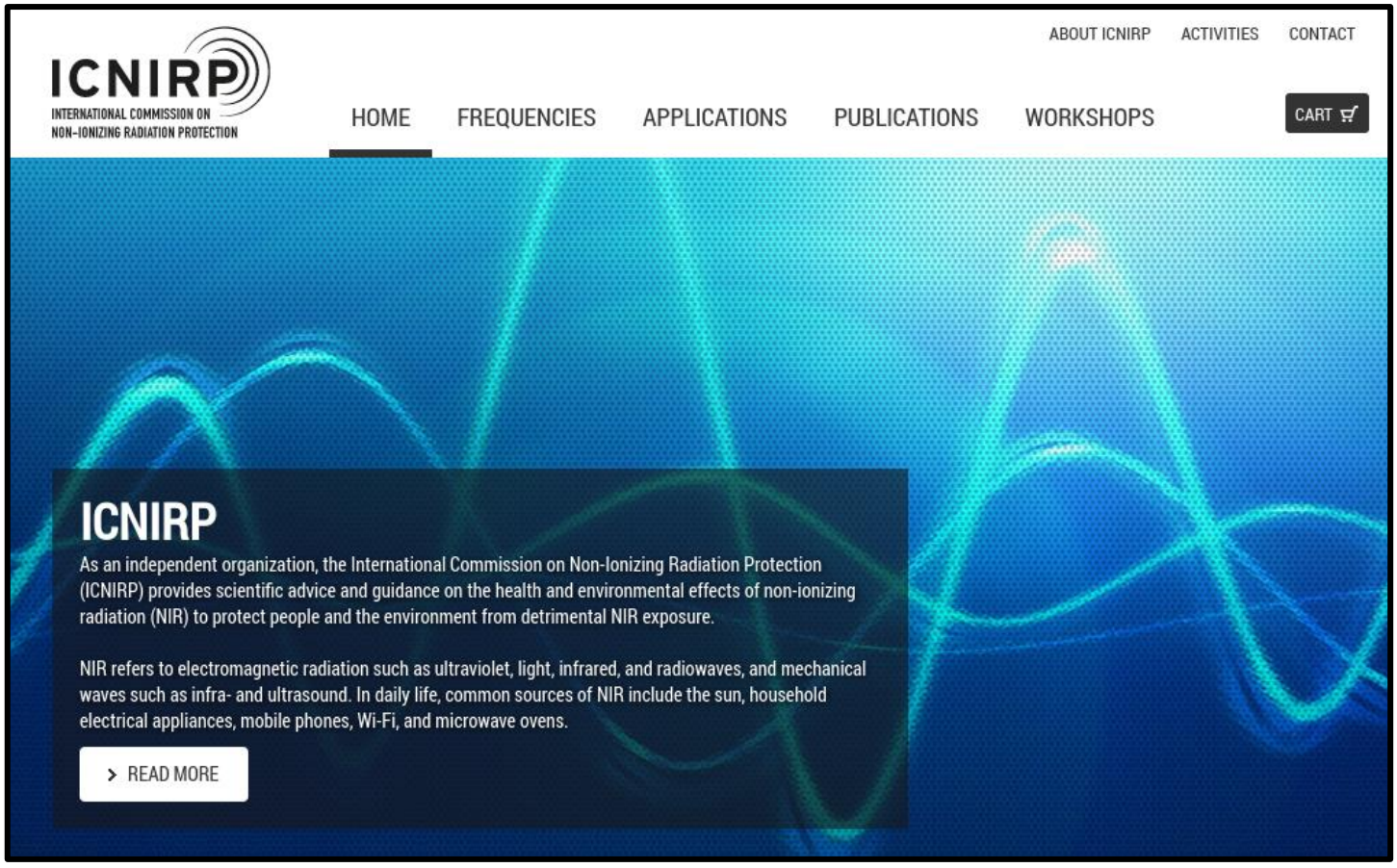
Telefonica needs to shut down the 5G network immediately and stop erecting more radiation cancer cluster towers all over the world. These towers should really be fully dismantled. They are completely out of tune with mother nature, disharmonious and are wreaking havoc on all biological life's energy fields worldwide.

The World Health Organisation needs to be held accountable for admitting… "To date the WHO has not developed norms and standards for non-ionising radiation." If no standards exist then organisation should not be stating they are in compliance with the WHO.

3. 1. INTERNATIONAL STANDARDS FOR NON-IONIZING RADIATION PROTECTION

Member states are increasingly interested in clear guidance based on harmonized standards and their application within a national framework of protection. The development of non-ionizing safety standards has been proposed by a Member State using the example of the International Ionizing radiation Basic Safety Standards (BSS) developed as a collaborative approach between different UN organizations.

One of WHO's six core functions is to "set norms and standards, and promote and monitor their implementation". Such endeavour has been undertaken in the PHE Department for several environmental agents, for example for ionizing radiation (BSS, 2012) and drinking water (GDWQ, 2011). To date, WHO has not developed norms and standards for non-ionizing radiation but has promoted the harmonization of standards worldwide and has provided advice with respect to the development of health-based exposure standards (2006) and national model legislation (2006).


ICNIRP
INTERNATIONAL COMMISSION ON NON-IONIZING RADIATION PROTECTION
ABOUT ICNIRP
ACTIVITIES
CONTACT
HOME
FREQUENCIES
APPLICATIONS
PUBLICATIONS
WORKSHOPS
CART
ICNIRP
As an independent organization, the International Commission on Non-Ionizing Radiation Protection (ICNIRP) provides scientific advice and guidance on the health and environmental effects of non-ionizing radiation (NIR) to protect people and the environment from detrimental NIR exposure.
NIR refers to electromagnetic radiation such as ultraviolet, light, infrared, and radiowaves, and mechanical waves such as infra- and ultrasound. In daily life, common sources of NIR include the sun, household electrical appliances, mobile phones, Wi-Fi, and microwave ovens.
> READ MORE

ICNIRP is the internationally recognised supposedly “independent organisation” (I think not) who is responsible for setting the safety standards for public in relation to non-ionising radiation exposure from electro magnetic fields.

They have done a fantastic job of manipulating information and confusing the public by publishing very lengthy documents that only cover very small isolated pieces of research in regards to non-ionising radiation protection.

Telefonica and Vodafone say they work within the "Guidelines" set by the ICNIRP. ICNIRP is a private non-government organisation that has scientist that have worked or work in the telecommunication industry. They are not NON-INDUSTRY scientist meaning they have conflicts of interest.

They ignore 1000s of well published documented studies from non-industry (Non-telecommunications) scientists showing clear evidence and warnings to EMF exposure in the low and high frequency fields.

The ICNIRP guidelines are voluminous and vague, they do not offer a fair and thorough safety analysis for EMF exposure for low and high frequency which they admit on their website by not providing a "Certificate of Conformity".

There main focus is heating and thermal exposure to EMF and provide little to no evidence on physical and non-physical biological effects, neurological effects, reproductive effects and cancerous effects.

The telecommunication industries mainly (Telefonica and Vodafone) have continued to build this 5G infrastructure, using mobile towers and base stations for the past 20 years relying on the guidelines set out by the ICNIRP IN 1998. These guidelines are unacceptable and are not safety standards for EMF exposure. This a crime against humanity and they must be held accountable.

THE ICNIRP COMMISION BOARD MEMBERS

COMMISSION

Composition: The Commission membership consists of a Chairperson, Vice-Chairperson and up to 12 members. Commission members are independent experts in the scientific disciplines relevant to non-ionizing radiation protection (biology, epidemiology, physics, bio-physics, medicine). In carrying out their voluntary work for the Commission they do not represent either their countries of origin or their institutes. ICNIRP members are required to declare any personal interests in relation to their activities for ICNIRP. Members' declarations of personal interests are available below along the member's profile.

Election: Members are elected to the Commission from nominations received by current members, and by the Executive Council of the International Radiation Protection Association (IRPA) and the IRPA Associate Societies. 2015 the call for nominations was extended to international and national radiation protection bodies. The election takes place every 4 years at the last ICNIRP Annual General Meeting before each IRPA Congress.

Duties: The duties of the Commission include:

- Formulating and implementing ICNIRP policy in accordance with the Charter and resources available.
- Specifying, prioritizing and directing the ICNIRP work plan.
- Providing chairmanship and scientific expertise to the Project Groups and coordinating their activities according to the needs of ICNIRP.
- Reviewing and approving proposed ICNIRP publications.
- Fostering cooperation with other organizations in the field of non-ionizing radiation protection.

ERIC VAN RONGEN

CHAIR

Eric van Rongen graduated in biology at the State University of Leyden, the Netherlands in 1980. Subsequently he performed research on tumour and normal tissue radiobiology at the Radiobiological Institute of the Netherlands Organization for Applied Scientific Research TNO and received his PhD in 1989. Since 1992 he is senior scientific staff member with the Health Council of the Netherlands and primarily involved with non-ionizing radiation. As Scientific Secretary of several Expert Committees he has written many advisory reports on the health effects of low and high frequency electromagnetic fields, UV and ionizing radiation, but also on non-radiation subjects. He is member of the International Advisory Committee of the WHO International EMF Project and cooperates closely with WHO on the development of Environmental Health Criteria monographs on EMF, currently the one on radiofrequency fields. He is member of several national and international organizations and committees in the field of non-ionizing radiation and President of the European Bioelectromagnetics Association (EBEA). He has been serving ICNIRP as Consulting Member since May 2001, as member of the former Standing Committee II Biology since November 2006 and has been elected in the Commission in May 2010. He is now serving as the ICNIRP Chair since May 2016.

> CONTACT ERIC VAN RONGEN

Declaration of Personal Interest

MARIA FEYCHTING

VICE-CHAIR

Maria Feychting is a Professor of Epidemiology at the Institute of Environmental Medicine, Karolinska Institutet, Stockholm, Sweden. Her research is focused on environmental risk factors for chronic diseases, primarily cancer but also neurodegenerative diseases. She has been involved in epidemiologic research on non-ionising radiation since 1987, covering both ELF and RF electromagnetic fields. She has a specific interest in adult and childhood brain tumour aetiology, both environmental and genetic factors, as well as gene-environment interactions. She participates in the work of the WHO EMF programme, as well as other national and international scientific committees. She is scientific secretary of the Swedish Radiation Protection Authority's independent scientific expert group on electromagnetic fields. She joined the Main Commission in 2008 and was elected to serve the Commission as its Vice Chair in 2012.

> CONTACT MARIA FEYCHTING

Declaration of Personal Interest

RODNEY CROFT

MEMBER

Rodney Croft is Professor of Health Psychology at the School of Psychology, University of Wollongong, Australia. He obtained degrees in Philosophy and Psychology before completing his PhD in Psychology at the University of Wollongong in 2000, and then worked in the area of cognitive neuroscience as a postdoc at Imperial College, London, and then at Swinburne University, Australia. His research focuses on the delineation of human brain function, particularly as it relates to agents that might affect it (e.g. electromagnetic fields, illicit and medicinal drugs), as well as psychiatry more generally. He has been involved in research on ELF and RF non-ionising radiation since 2000, primarily utilising the electroencephalogram as a means of observing subtle alterations in brain function. He participates in a variety of national and international scientific and government committees, was Executive Director of the Australian Centre for Radiofrequency Bioeffects Research (2004-2011) and is currently Director of the Australian Centre for Electromagnetic Bioeffects Research. Croft was appointed in 2014 an Associate Editor of the BEMS journal, and joined the ICNIRP Biology Standing Committee in 2008 and Main Commission in 2012.

> CONTACT RODNEY CROFT

Declaration of Personal Interest

GUGLIELMO D'INZEO

MEMBER

Guglielmo d'Inzeo is a Professor of "Bioelectromagnetic Interaction" at "La Sapienza" University of Rome since 1990. His research activities have been concerned with active and passive microwave component design and with bioelectromagnetism. In the bioelectromagnetic area, his fields of interest are the interaction of electromagnetic fields with biological tissues, the effects of microwaves and ELF fields on biological samples and humans, and the modelling of the interaction mechanisms. He is author or co-author of more than seventy papers in international refereed journals and books. Appointed as a member of the EBEA Council in 1989, he acted as President from 1993 to 1998. From 1992 to 2000 he was an Italian representative for the COST 244 and 244Bis projects on "Biomedical Effects of Electromagnetic Fields". From 1998 to 2004 he chaired the Italian ICEmB (Inter-University Centre Electromagnetic Fields and Biosystems). From 2001 to 2006 he was an Italian National representative in COST 281 project "Potential Health Effects from Emerging Wireless Communication Systems" and from 2007 in COST BM0704 related project. From 2004 to 2009, he served as a member of IEEE International Committee on Electromagnetic Safety (ICES), Technical Committee 95 (TC95). From 2008 to 2011 he chaired the Commission K "Electromagnetics in Biology and Medicine" of URSI "Union Radio-Scientifique Internationale". From 2014 he has been the Italian National Representative of COST BM1309 Action "European network for innovative uses of EMFs in biomedical applications (EMF-MED)". He joined the ICNIRP Commission in 2016.

ADÈLE GREEN
MEMBER

Adèle Green received her medical degree and her PhD respectively in 1976, 1984 from the University of Queensland, Australia and her MSc in Epidemiology in 1985 from the London School Hygiene & Tropical Medicine, UK. She is now working as Senior Scientist at the QIMR Berghofer Medical Rersearch Institute, Brisbane, Australia and is a Conjoint Professor at the Australian Centre for International Tropical Health and Nutrition, at the University of Queensland. Dr. Green has served ICNIRP SCI since May 2000 and was elected to serve on the Main Commission in 2008.

Declaration of Personal Interest

AKIMASA HIRATA
MEMBER

Akimasa Hirata received his B.E. and Ph.D. degrees in communications engineering from Osaka University, Suita, Japan, in 1996 and 2000, respectively. In 2001, he joined the Department of Communications Engineering, Osaka University as an Assistant Professor. In 2004, he moved to the Department of Computer Science and Engineering, Nagoya Institute of Technology where he is Full Professor. His research interests are in computational dosimetry for electromagnetic fields (from extremely low frequency to millimeter waves). Dr. Hirata is an Administrative Committee Member and Subcommittee Chairperson in IEEE International Committee on Electromagnetic Safety (ICES). He is an editorial board member of Physics in Medicine and Biology (2010-), and was an Associate Editor of IEEE Transactions on Biomedical Engineering (from 2006 to 2012), etc. Dr. Hirata won several awards including Prizes for Science and Technology (Research Category 2011, Public Understanding Promotion Category 2014) by the Commendation for Science and Technology by the Minister of Education, Culture, Sports, Science and Technology, Japan, and IEEE EMC-S Technical Achievement Award. He is a Fellow of Institute of Physics. Akimasa Hirata was elected a Member of the ICNIRP Main Commission in May 2016.

> CONTACT AKIMASA HIRATA

Declaration of Personal Interest

CARMELA MARINO
MEMBER

Carmela Marino studied Biological sciences in Faculty of Sciences of "La Sapienza" University of Rome. She was a Scientific Research Fellow at the Gray Laboratory, Cancer Research Campaign, Mount Vernon Hospital, Nothwood, U.K where she was involved in experimental studies on radiobiology applied to radiotherapy. On behalf of ENEA she coordinated the research activity Subprogram 3 *Interaction between sources and biosystems* (MURST/ENEA-CNR Italian National Program *"Human and Environmental Protection from Electromagnetic Emissions")* and was involved in *several projects of the 5° and 6°FP, as member of steering Committee and Coordinator of research unit.* Since 1990 Carmela Marino is Contract Professor of Radiobiology and Thermobiology and Biological Effects of EM fields with the Post-Graduate School of Health Physics, "Tor Vergata" University of Rome, Italy. She is currently Head of the Unit of Radiation Biology and Human Health, at Casaccia Research Center of Italian Agency for New Technologies, Energy and Sustainable Economic Development (ENEA). She joined the Commission in 2012.

> CONTACT CARMELA MARINO

Declaration of Personal Interest

SHARON MILLER
MEMBER

Sharon Miller works as a Senior Optical Engineer in the Magnetic Resonance and Electronic Products Branch, Division of Radiological Health, Office of In vitro Diagnostics and Radiological Health at the Center for Devices and Radiological Health, part of the US Food and Drug Administration. This group has responsibility for developing, maintaining and enforcing standards related to radiation-emitting electronic products. In addition, this group serves as a technical resource for FDA field and State inspectors that routinely inspect both manufacturers and user facilities of radiation-emitting electronic products. In particular, Sharon Miller's expertise is in the field of optical radiation measurements, bioeffects and standards development. She graduated from the George Washington University in Washington, DC with a Master's Degree and received her PhD in the field of Biophysics from the Faculty of Medicine, University of Leiden, The Netherlands, in 2016. Sharon Miller has conducted research over the past 30 years regarding the potential hazards from optical radiation-emitting medical devices and consumer products. In addition, she has served as the Principal Investigator of two human studies that examined the effects of UV radiation on human skin. She serves on numerous IEC and ISO standard committees and acted as co-Chair of a CIE, Division 6 committee tasked with generating a Technical Report about Minimal Erythemal Doses in different skin types. She has authored over 100 scientific peer-reviewed publications and presentations and six book chapters. Sharon Miller was elected Member of the ICNIRP Scientific Expert Group (SEG) in November 2014 and joined the Commission in 2016.

GUNNHILD OFTEDAL

MEMBER

Gunnhild Oftedal obtained a degree in biophysics and PhD in psycho-physio acoustics, with a focus on effects on hearing, in 1985 at the Norwegian University of Technology (NTNU). Currently, she is working as Research Co-ordinator at the Faculty of Information Technology and Electrical Engineering, NTNU. From the early 1990s, she has been involved in research on health effects of EMF in the ELF and the RF ranges, mainly with experimental human studies and observational studies. Her focus has been on symptoms attributed to electromagnetic fields, but she also has been involved in studies on pregnancy outcomes in populations exposed to RF fields. She is member of international organisations in the field of non-ionising radiation and participates in the work of WHO on the health risk assessment on RF fields. She is an ICNIRP commission member since May 2016.

> CONTACT GUNNHILD OFTEDAL

Declaration of Personal Interest

TSUTOMU OKUNO

MEMBER

Tsutomu Okuno received his B.S. and M.S. in Physics and his Ph.D in Applied Physics from Tohoku University. He is working at the National Institute of Occupational Safety and Health, Japan. His research interests focus on optical radiation hazards. He is an editor of the journal "Industrial Health", a member of Safety, Health and Environment Committee, Japan Welding Engineering Society and a drafting member of Committee for Recommendation of Occupational Exposure Limits, Japan Society for Occupational Health. He has been serving ICNIRP SCIV from 1998 until 2004. Dr Okuno was appointed a Member of the ICNIRP Scientific Expert Group (SEG) in March 2013. He serves the ICNIRP Commission since 2016.

> CONTACT TSUTOMU OKUNO

Declaration of Personal Interest

MARTIN RÖÖSLI

MEMBER

Martin Röösli is Professor for environmental epidemiology at the Swiss Tropical- and Public Health Institute in Basel and leads the Environmental Exposures and Health Unit. He has a background in atmospheric physics and a PhD in environmental epidemiology. His research focuses on various environmental topics. In the field of non-ionizing radiation he conducted several exposure assessment and epidemiological studies on the health effects of electromagnetic fields including population based studies dealing with cancer, neurodegenerative diseases and non-specific symptoms of ill health and an occupational study of railway workers. He is a member in various national and international commissions on environmental health research including BERENIS, advisory group of COSMOS and the Scientific Council of the IARC. He has published numerous scientific papers, reviews and book chapters. Dr Röösli started to serve the ICNIRP Commission in 2016.

> CONTACT MARTIN RÖÖSLI

Declaration of Personal Interest

ZENON SIENKIEWICZ

MEMBER

Zenon Sienkiewicz graduated from Chelsea College, University of London with a BSc in Physiology and then received a PhD from Queen Mary College, University of London, for research into learning and memory mechanisms in goldfish. Subsequently, he studied the neurophysiology of feeding and satiety in non-human primates in the Department of Experimental Psychology, University of Oxford. He has studied electromagnetic fields since 1985 and is now Senior Scientific Group Leader of the Physiology and Neurobiology Group at the Centre for Radiation, Chemical and Environmental Hazards which is part of Public Health England. His particular research interests include the physiological and behavioural effects of power frequency and radiofrequency fields, and the effects of prenatal exposure to ionising radiation or ultrasound on behaviour. Zenon has been appointed to several expert advisory committees, including the Programme Management Committee of the UK Mobile Telecommunications and Health Research (MTHR) Programme. He joined the Commission in January 2011.

> CONTACT ZENON SIENKIEWICZ

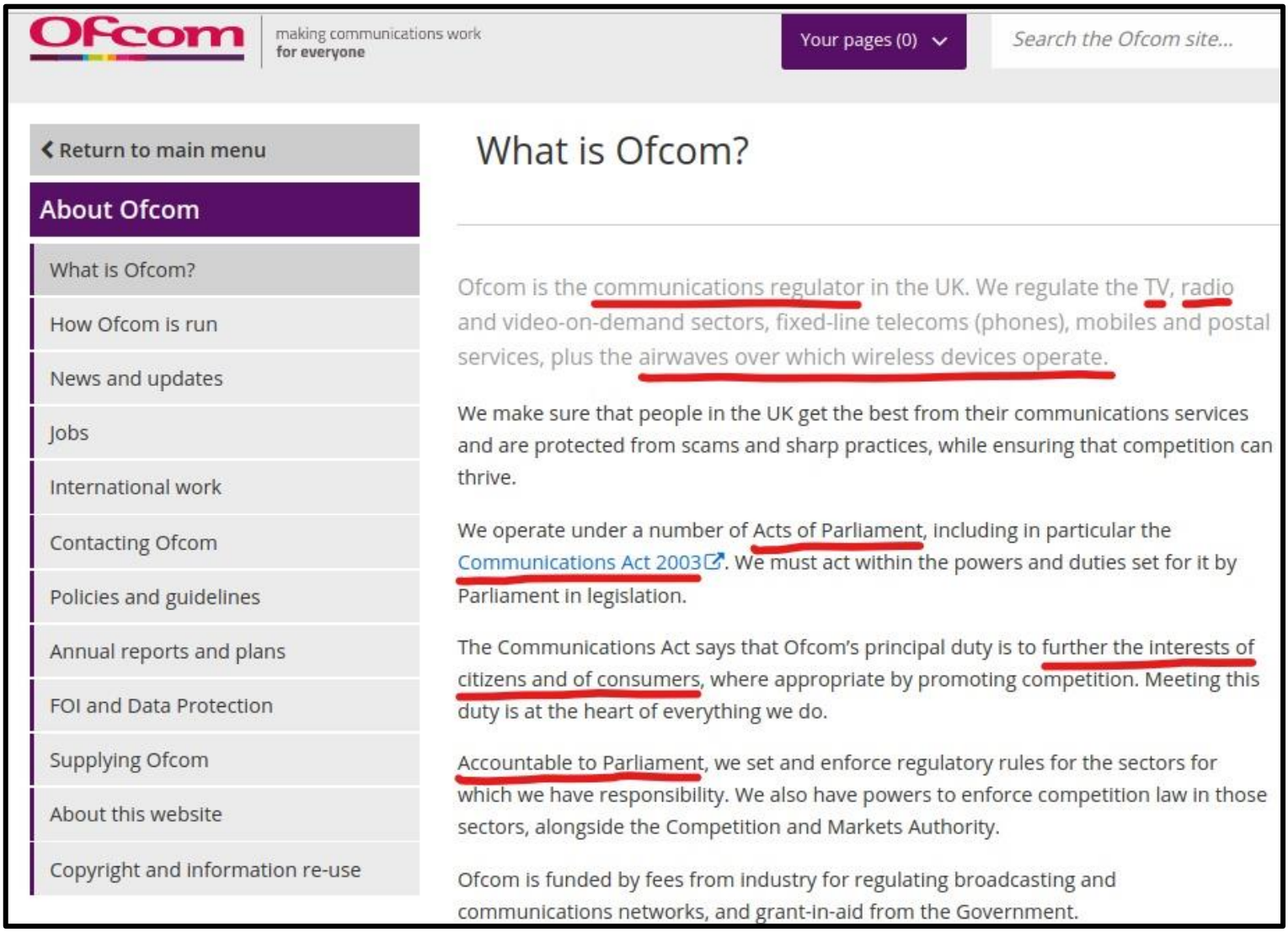
Declaration of Personal Interest

Soichi Watanabe received his PhD in Electrical Engineering in 1996 from the Tokyo Metropolitan University and joined the Communications Research Laboratory (CRL), Ministry of Posts and Telecommunications. He is currently a Research Manager responsible for leading RF safety in the National Institute of Information and Communications Technology (NICT), which was established from CRL and another institution since 2004.

Dr. Watanabe has been engaging on various topics related with NIR, especially RF fields. One of the most important researches is to develop voxel human models which include the world's first adult female whole-body model and pregnant woman whole-body model. Another his contribution to NIR is international standardizations, such as ITU, IEC, and IEEE. His research has mainly been dedicated to increasing scientific reliability of compliance procedures to NIR guidelines, e.g., uncertainty evaluation, calibration, and validation, which are responsible functions for national standard institutes such as NICT. His contribution to NIR is comprehensive, effective and neutral for developing adequate NIR environment for general public and occupational situations. He is a secretary of Japanese National Committee of K-Commission, Internal Union of Radio Science (URSI) from 2008, a secretary of Japanese National Committee of IEC/TC106 from 2006, and a member of the Committee for Radio-Wave Use Environment of Information and Communications Council and a member of the Committee to Promote Research on the Possible Biological Effect of Electromagnetic Fields, Ministry of Internal Affair and Communications of Japan. He has served the ICNIRP Standing Committee III since 2004 and was elected to join the Commission in 2012.

> CONTACT SOICHI WATANABE

This person is supposed to have a declaration of personal interests but he does not have one.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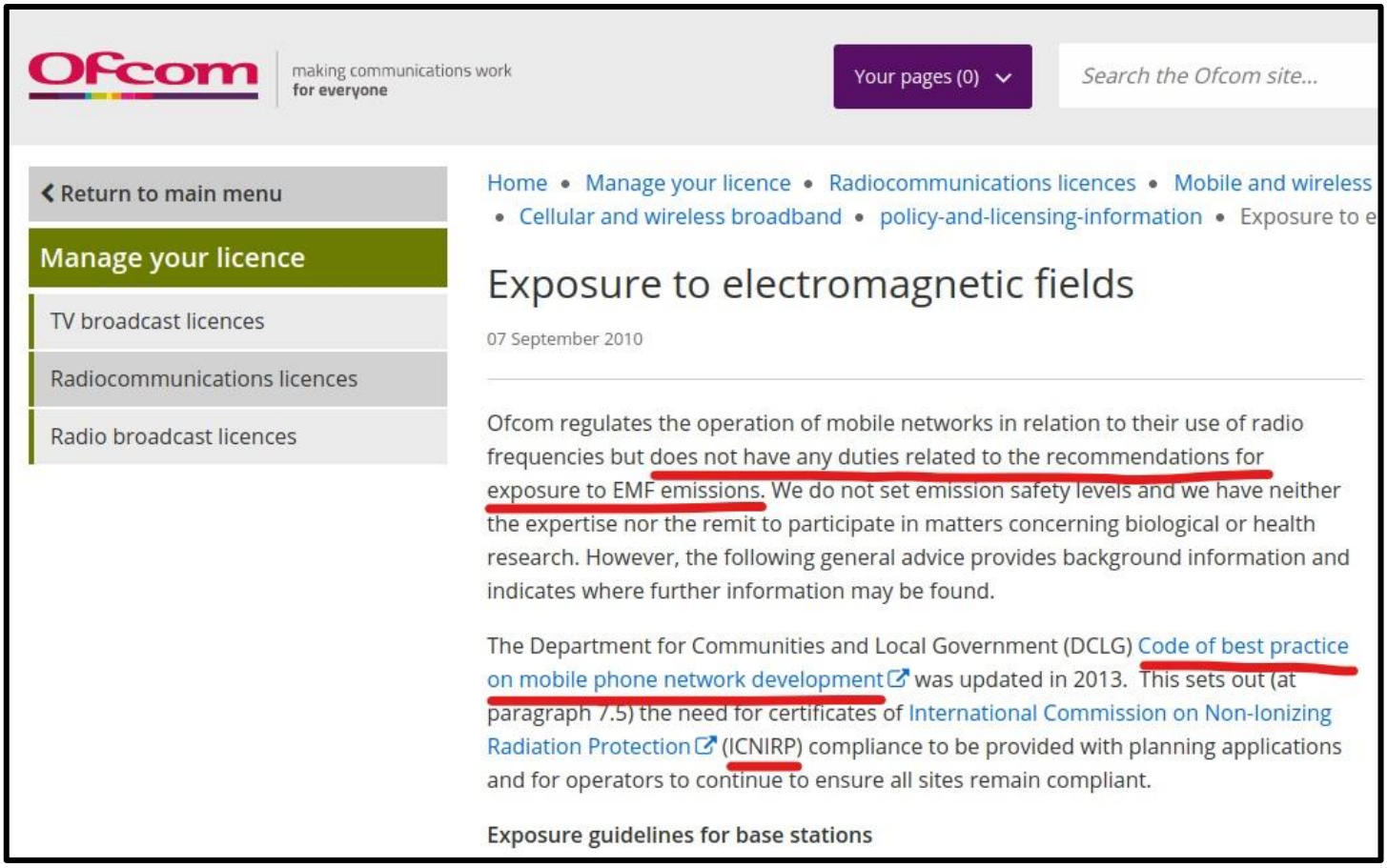
What is Ofcom?
Ofcom is the communications regulator in the UK. We regulate the TV, radio and video-on-demand sectors, fixed-line telecoms (phones), mobiles and postal services, plus the airwaves over which wireless devices operate.
We make sure that people in the UK get the best from their communications services and are protected from scams and sharp practices, while ensuring that competition can thrive.
We operate under a number of Acts of Parliament, including in particular the Communications Act 2003. We must act within the powers and duties set for it by Parliament in legislation.
The Communications Act says that Ofcom's principal duty is to further the interests of citizens and of consumers, where appropriate by promoting competition. Meeting this duty is at the heart of everything we do.
Accountable to Parliament, we set and enforce regulatory rules for the sectors for which we have responsibility. We also have powers to enforce competition law in those sectors, alongside the Competition and Markets Authority.
Ofcom is funded by fees from industry for regulating broadcasting and communications networks, and grant-in-aid from the Government.

Ofcom if the communications regulator in the UK. They operate under different legislation and are only accountable to parliament. The communications act states that Ofcoms principle duty is to <u>"further the interests of citizens and consumers."</u>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Exposure to electromagnetic fields
07 September 2010
Ofcom regulates the operation of mobile networks in relation to their use of radio frequencies but does not have any duties related to the recommendations for exposure to EMF emissions. We do not set emission safety levels and we have neither the expertise nor the remit to participate in matters concerning biological or health research. However, the following general advice provides background information and indicates where further information may be found.
The Department for Communities and Local Government (DCLG) Code of best practice on mobile phone network development was updated in 2013. This sets out (at paragraph 7.5) the need for certificates of International Commission on Non-Ionizing Radiation Protection (ICNIRP) compliance to be provided with planning applications and for operators to continue to ensure all sites remain compliant.
Exposure guidelines for base stations

Ofcom clearly state here that they are not responsible for providing safe electro magnetic field emissions, they state this responsibility lies with ICNIRP (International Commission of Non-Ionising Radiation Protection).

As I have already proven ICNIRP have failed to provide safe standards and have abused their responsibilities by failing to carry out sufficient safety studies for the general public.

Exposure guidelines for base stations

The UK Health and Safety Executive (HSE) is one of a number of public bodies which regulate work that causes or could cause EMF exposure of workers or the public and has published information which covers matters relating to mobile phone technology. Public Health England has also published advice at Mobile phone base stations: radio waves and health.

Ofcom has carried out measurements of representative samples of cellular base stations in publicly accessible areas which indicate that, even in the vicinity of cellular masts, measurements are consistently found to be very significantly below these levels. Ofcom's remit is restricted to carrying out sample measurements of emission levels so as to allow those with an interest to assess compliance with the above ICNIRP guidance. Further information about Ofcom's surveys of radio emissions near to mobile phone base stations are published in our website information sheet OfW80.

Reference Information

- World Health Organization (WHO) - Electromagnetic Fields
- WHO - Electromagnetic fields and public health: mobile phones
- WHO - Electromagnetic fields and public health: base stations and wireless technologies
- ICNIRP - guidelines for exposure to EMF Guidelines for Limiting Exposure to Time-Varying Electric, Magnetic, and Electromagnetic Fields (up to 300 GHz), Health Physics Vol. 74, No 4, pp 494-522, 1998
- Department of Health (DH)
- Mobile phone base stations and health (DH – 2011)

Ofcom state here they operate within ICNIRPS guidelines. But remember, the last guidelines were published in 1998 and their safety standards are insufficient.

Ofcom operates under Acts of Parliament, meaning we can hold Ofcom accountable but more importantly the Government. They refer back to the guidelines set out by ICNIRP but as we have discussed they are not safe.

Ofcom (Under direction of the Government) also issue "CODE OF POWERS" to CTIL. CTIL have "Code Powers" – a statutory notification under section 107(6) of the communications act 2003 appointed to them via "Ofcom". If an agreement cannot be made between the private land owner and CTIL then CTIL have the power to apply to the crown court to obtain rights to execute work on said piece of land. "Code Powers" also give CTIL the power to construct infrastructure (mobile EMF towers) on public land without needing to obtain a specific license and benefit from certain "Immunities" from the town and country planning legislation.

THEY ALL NEED TO HELD ACCOUNTABLE

THE CODE OF BEST PRACTICE ON MOBILE PHONE NETWORK DEVELOPMENT

This legislation is supposed to provide guidance to mobile network operators, their agents and contractors, and equally to all local planning authorities. It is also a useful tool for other interested stakeholders such as community groups, amenity bodies and individuals with an interest in mobile connectivity.

Code of Best Practice on Mobile Network Development in England

This Code has been developed by a Working Group consisting of representatives of: Arqiva; the Department for Communities and Local Government; the Department for Culture Media and Sport; the Department for Environment, Food and Rural Affairs; Historic England; the Local Government Association; Mobile UK (representing the Mobile Network Operators); Landscapes for Life; National Parks England; and the Planning Officers Society.

1 Scope

1.1 The scope of this Code of Best Practice is to provide guidance in England to Mobile Network Operators, their agents and contractors, and equally to all local planning authorities. It is also a useful tool for other interested stakeholders such as community groups, amenity bodies and individuals with an interest in mobile connectivity. A separate code applies to fixed line operators.

1.2 It is recommended that other wireless communications operators follow the principles of this Code, where appropriate.

1.3 The principal aim of this Code is to ensure that the Government's objective of supporting high quality communications infrastructure, which is vital to continued economic prosperity and social inclusion for all, is met. The development of such infrastructure must be achieved in a timely and efficient manner, and in a way which balances connectivity imperatives and the economic, community and social benefits that this brings with the environmental considerations that can be associated with such development.

1.4 The Code also has an important role in making sure that appropriate engagement takes place with local communities and other interested parties.

1.5 The Code applies to all forms of wireless development but very obviously is most relevant to proposals for new masts or base stations and significant additions, extensions or replacements of existing sites

2 Communications Policy & Planning Policy

2.1 The continued expansion and development of mobile networks is a key element of the National Infrastructure Delivery Plan 2016 – 2021. This recognises that digital communications are now a crucial component of everyday life, with improvements in connectivity being key to a vibrant economy.

2.2 Consumers, businesses and public bodies increasingly rely on mobile communications and expect to receive a signal wherever they are. Coverage in rural areas is recognised as a vital component for maintaining economic activity and social inclusion.

Code of Best Practice 2016: Edition Agreed: 24.06.2016

2.3 Recent changes in planning policy [and regulation] are intended to align with Government communications policy, where the ultimate goal is to achieve mobile coverage wherever it is needed.

2.4 The National Planning Policy Framework ('NPPF') acknowledges that high quality communications infrastructure is essential for sustainable economic growth and sets out the Government's planning policies for England, and how they are expected to be applied.

2.5 The NPPF advises that the purpose of the planning system is to contribute to the achievement of sustainable development, which it states has three dimensions: economic, social and environmental and that local planning authorities should work proactively with applicants to secure developments that improve the economic, social and environmental conditions of the area.

2.6 How sustainable development can be achieved is set out in paragraphs 6 to10 of the NPPF. At the heart of the NPPF is the presumption in favour of sustainable development, which should be seen as a golden thread running through both plan making and decision making and which is set out in paragraphs 11 to 16.

https://www.gov.uk/government/publications/national-planning-policy-framework--2

2.7 Section 5 of the NPPF sets out the principles on which this Code of Best Practice is based. They are:

- The development of high speed broadband technology and other communications networks plays a vital role in enhancing the provision of local community facilities and services.
- The numbers of radio and telecommunications masts and sites for such installations should be kept to a minimum consistent with the efficient operation of the network.
- Existing masts, buildings or other structures should be used unless the need for a new site has been justified; and
- Where new sites are required, equipment should be sympathetically designed and camouflaged where appropriate.

2.8 The following key points in the NPPF are also relevant to this code:

- The significant potential to improve efficiency and effectiveness of the planning application system for all parties through early engagement in appropriate circumstances.

2.8 The following key points in the NPPF are also relevant to this code:

- The significant potential to improve efficiency and effectiveness of the planning application system for all parties through early engagement in appropriate circumstances.
- The need for any information requirements in the development management process to be proportionate, relevant, necessary and material to the application in question.
- Protecting and enhancing valued landscapes.
- Sustaining and enhancing the significance of heritage assets

Code of best practice on mobile phone network development

Guidance for mobile network operators, their agents and contractors, and local planning authorities.

Published 11 November 2002
Last updated 26 July 2013 — see all updates
From: Ministry of Housing, Communities & Local Government

This publication was withdrawn on 17 January 2017

A new Code of best practice on mobile network development in England was published on 24 July 2013.

Applies to: **England**

Documents

Related content

Policy
Planning system

Communications and telecoms

Documents

Details

This guidance has been superseded. The government believes that for the code of best practice to be effective it has to be developed and owned by industry, local authority groups and other interested parties.

A working group representing these organisations published a revised sector-led and owned Code of best practice on mobile network development in England on 24 July 2013.

Published 11 November 2002
Last updated 26 July 2013 + show all updates

4 The Evolution of Mobile Networks

4.1 As technology has evolved, we have been able to do more and more with our mobile devices. Second Generation (2G) technology gave us voice calls and text messages, and Third Generation (3G) gave us access to the Internet and other data on the move. More recently, 4G brings superfast mobile broadband at speeds roughly equivalent to those you would expect from a fixed broadband connection. At the same time customer expectations have evolved with the technology – the expectation is that they will always be connected and able to access services in exactly the same way as fixed broadband for personal, educational and business purposes.

4.2 Because data, i.e. accessing the internet, puts more pressure on network capacity, the move from 2G to 3G resulted in the need for more base stations to keep pace with customer demand. More base stations were also needed because the higher frequencies originally used for some 3G services meant signals did not travel as far, so each base station covered a smaller area. However, at the same time, the operators have been streamlining their networks, sharing more base stations and working in groups to significantly reduce the amount of infrastructure they need to use. This makes good business sense and minimises the impact on the environment at the same time as bringing individuals, communities and businesses the services they demand.

4.3 In line with the NPPF, Operators anticipate maximising the use of their existing network infrastructure for the provision of 4G services, and are also similarly upgrading their 3G network infrastructure to improve capacity and coverage. However, this does not mean that there will not be a need for any new base stations. For example, more base stations will be needed in areas where there has previously been only limited or no coverage, and where coverage and capacity needs to be enhanced in line with Government commitments and customer demand. Similarly, some new sites will be required to replace existing sites that are lost, for example, through redevelopment of an existing building. Some existing masts may need to be redeveloped or replaced to enable an upgrade in services to take place.

5 Mobile Connectivity in the 21st Century

5.1 Mobile phones and other devices are now everywhere. Mobile connectivity is now about far more than simply making calls and texts, but is also about mobile broadband. The majority of mobile phones in the UK are Internet-enabled smartphones, and large numbers of people also now own tablet devices.

5.2 Even when they have a fixed broadband connection available, people are increasingly choosing to access the Internet using a mobile device, and the numbers doing so are growing, as ownership of Internet-enabled devices rises.

5.3 By the start of the second decade of this century, the greatest increase in traffic across mobile networks was in data, i.e. Internet use. As the Government's productivity plan, '*Fixing the Foundations: Creating a More Prosperous Nation*'[1] states 'reliable and high quality fixed and mobile broadband connections support growth in productivity, efficiency and labour force participation across the whole economy. They enable new and more efficient business processes, access to new markets and support flexible working and working from home'.

5.4 In terms of the wider economic impact of mobile connectivity, research by Deloitte on the economic impact of mobile broadband across a range of countries, showed that a doubling of mobile data use leads to an increase of 0.5 percentage points in the Gross Domestic Product per capita[2], while another study put the benefit of 4G mobile broadband to the UK economy at £75 billion over a decade[3].

5.5 Good mobile connectivity also promotes social inclusion. Across the UK as a whole, research by Ofcom has shown that in recent years, more people rely on a mobile phone than rely on a landline; and that people on lower incomes are even more likely to live in a mobile-only household, or to access the Internet using a mobile connection.

5.6 Mobile connectivity also helps in the delivery of public services. Central and local government are increasingly encouraging people to access services online. In the NHS, studies show that lives are more likely to be saved when a 999 call is made from a mobile than from a landline. Ofcom reports that two out of three calls to the emergency services are made from mobile devices. Text message reminders also improve

compliance with treatment regimes for those taking a cocktail of medicines, as do many elderly patients, or people with HIV, for example. Telehealth, which relies on digital connectivity, is increasingly being used to support people to have greater choice, control and confidence in their care and wellbeing; enable safer, effective and more personalised care; and deliver better outcomes for patients[4].

5.7 Good mobile connectivity also promotes sustainability, both for individual communities and across the economy as a whole. For example, it enables home working, thus reducing the need for travel, and so contributes to minimising pollution, and mitigating climate change and helps in the move towards a low carbon economy.

5.8 The mobile telecommunications network is a crucial piece of national infrastructure in economic, community and social terms. However, it is delivered locally, with planning permission, where applicable, being decided by the local planning authorities of England.

5.9 Increasing consumer demand, especially for data is putting demands on mobile operators for improved connectivity and more capacity on their networks. This is driven by the widespread adoption of smartphones and the rapid uptake of tablet devices, and the way consumers are now using them, often choosing to do so when they have a fixed connection available. In addition, the Government has ambitious aspirations for improving connectivity and coverage, especially in rural areas. All these factors result in the need to continually upgrade and improve mobile networks, which will not function without the necessary infrastructure on which they rely.

THE NATIONAL PLANNING POLICY FRAMEWORK

This legislation sets out the Governments planning policies for England and how these are expected to be applied. Including planning policy and frame work for the telecommunications industry.

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OFCOM FREQUENCY BANDS

Ofcom
making communications work for everyone

Award of the 2.3 GHz and 3.4 GHz spectrum bands – Notice under regulation 16(4) of the Wireless Telegraphy (Licence Award) Regulations 2018 (the "Regulations")

In accordance with regulation 16(3) of the Regulations, Ofcom has determined that there are one or more bidders, and Ofcom will therefore proceed to grant licences in accordance with the procedure set out in Part 4 of the Regulations.

The following names of the bidders in the award process are published under regulation 16(4) of the regulations:

	Bidder
1.	Airspan Spectrum Holdings Limited
2.	Connexin Limited
3.	EE Limited
4.	Hutchison 3G UK Limited
5.	Telefónica UK Limited
	Vodafone Limited

Ofcom

5 March 2018

1. Executive summary

1.1 Ofcom has the statutory power under sections 14 and 122(7) of the Wireless Telegraphy Act 2006 (the "2006 Act") to make regulations to award licences by means of an auction.

1.2 This Statement sets out our decisions in relation to the drafting of the Wireless Telegraphy (Licence Award) Regulations 2018 (the "Regulations"). These Regulations give effect to the policy decisions we have made in connection with the award of the 2.3 GHz and 3.4 GHz spectrum bands.

1.3 Ofcom's policy decisions for the award are set out in three statements: "Public Sector Spectrum Release: Award of the 2.3 and 3.4 GHz spectrum bands" published in May 2015,[1] "Public Sector Spectrum Release (PSSR) - competition and auction design issues for the 2.3 GHz and 3.4 GHz spectrum award including reserve prices" published in October 2015,[2] and "Award of the 2.3 and 3.4 GHz spectrum bands: Competition issues and Auction Regulations" published in July 2017.[3]

1.4 Aspects of Ofcom's decisions on competition issues as set out in the 11 July 2017 statement were the subject of judicial review proceedings in the High Court brought by British Telecommunications Ltd (BT) and EE Ltd (EE)[4] and H3G UK Limited (H3G)[5]. BT and EE's action also challenged Ofcom's decision on the treatment of the pre-existing licence holder in the 3.4 GHz band. On 20 December 2017 the High Court rejected the claims of BT, EE and H3G and upheld the decisions of Ofcom as set out in the statements identified above.[6]

1.5 On 21 December 2017 H3G sought permission to appeal this decision in the Court of Appeal.[7] We are keen to ensure that we are in a position to move as quickly as possible to hold the auction once the judgment of the Court of Appeal has been given. We have therefore decided to proceed to make the auction Regulations. Once the Regulations are in force, we intend to progress a number of the preliminary administrative steps in the auction process, pending the outcome of H3G's appeal. These are steps that we would need to take whether or not the Court of Appeal upholds our decision. If we have to change the Regulations in light of the Court of Appeal's judgment we will do so with utmost expedition to minimise further delay.

the above factors, and the comments of stakeholders, we therefore decided to proceed with reserve prices of £1 million per 1 MHz in the 2.3 GHz band and £200,000 per 1 MHz in the 3.4 GHz band. We consider these levels to be appropriate to provide room for relevant price discovery whilst also addressing concerns about tacit collusion and strategic demand reduction. More information on the exercise we conducted to derive the reserve prices is available in our May 2015 Statement and further consultation.

Costs to Ofcom and the public sector

33. The following costs, to Ofcom and the public sector, are associated with our decision to auction the 2.3 GHz and 3.4 GHz spectrum:

    c) one-off administrative costs associated with making Statutory Instruments;

    d) costs of carrying out the award process; and

    e) costs of clearing the spectrum of MOD uses and investigating and resolving coexistence issues.

34. We consider that the level of costs in the first two categories is relatively low. For example, whilst there are costs of carrying out the award process itself, they amount at most to a few million pounds.

35. The costs of clearing the spectrum of MOD uses and of investigating the coexistence of new uses of the frequencies on users of neighbouring spectrum have fallen to the MOD as part of the process of freeing up the spectrum. We have previously noted[32] that the MOD's costs of clearing the spectrum are broadly in line with the reserve prices, which amount to £70m across the 2.3 GHz and 3.4 GHz bands.

36. In total, therefore, the costs to Ofcom and the public sector are likely to amount to less than £100m.

37. We consider that these costs of the award are likely to be small in comparison with the likely consumer benefits generated from the spectrum being awarded. We expect the value of such benefits to be very much larger than the costs described above (and the costs to business described below).

1000 MHZ = 1 GHZ1

£1 MILLION PER 1 MHZ IN 2.3GHZ BAND

£200,000 PER 1 MHZ IN 3.4GHZ BAND

2.3GHZ BAND

1MHZ = £1MILLION

1000MHZ/1GHZ= £1BILLION

2GHZ = £2BILLION

0.1GHZ = £10 MILLION

2.3GHZ BAND = £2BILLION £30 MILLION

3.4GHZ BAND

1 MHZ = £200 THOUSAND

1000MHZ/1GHZ = £200 MILLION

2GHZ = £400 MILLION

3GHZ = £600 MILLION

3.4GHZ = £680 MILLION

The cost of the frequency bands being sold to the telecommunication industry are staggering.

2.3Ghz spectrum has a reserve bid of £2Billion 30million with the potential to sell for more.

3.4Ghz spectrum has a reserve bid for £680Million with the potential to sell for more.

Can you see how much money they make from the telecommunication industry? This is just some of the frequency bands! They make billions, upon millions from telecommunications which is why they would never tell you the real dangers from electromagnetic fields and pump £0 amount of funding in health risk research.

HOW DARE THEY DECIEVE US LIKE THIS!

THEY MUST BE HELD ACCOUNTABLE!

CREATED BY SEAN ARGYLE

IF YOU APPRECIATE MY WORK PLEASE SUPPORT ME WITH A DONATION ON PAY PAL

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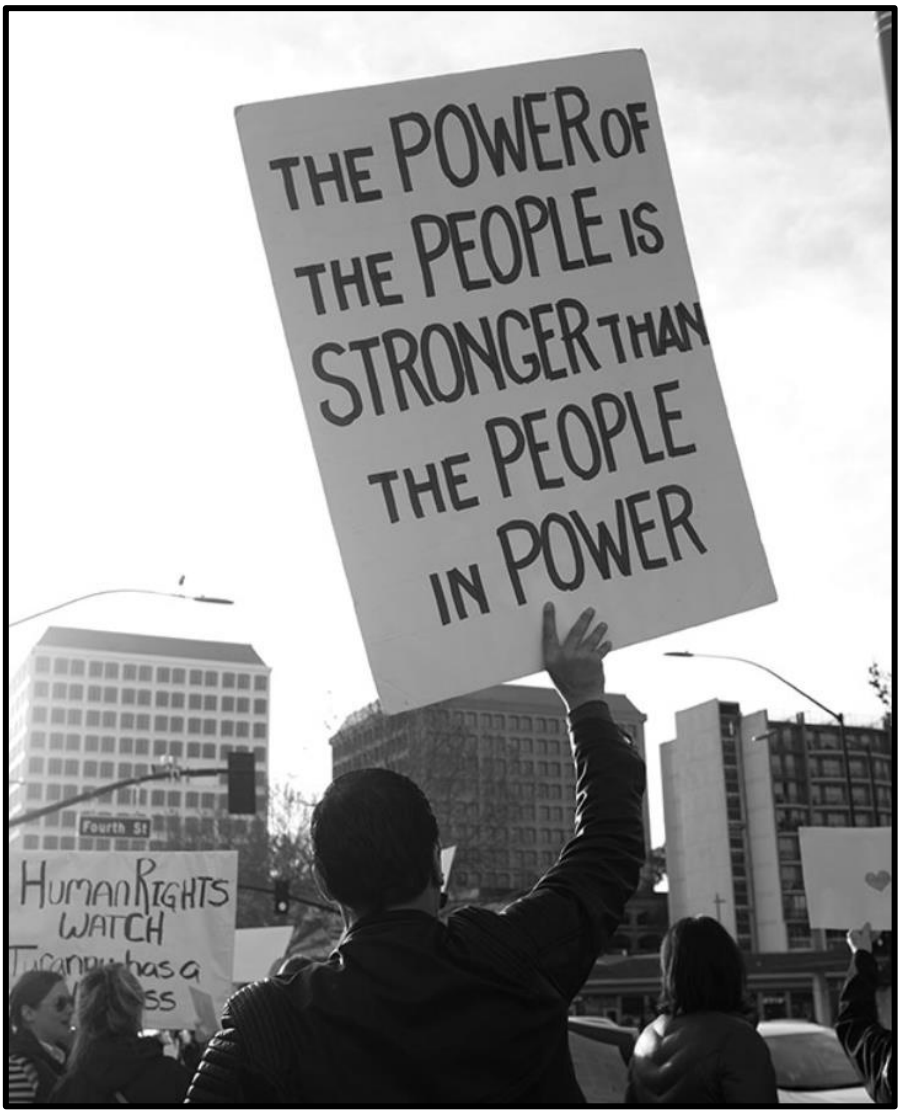

THE REVOLUTION OF HUMANITY IS NOW!